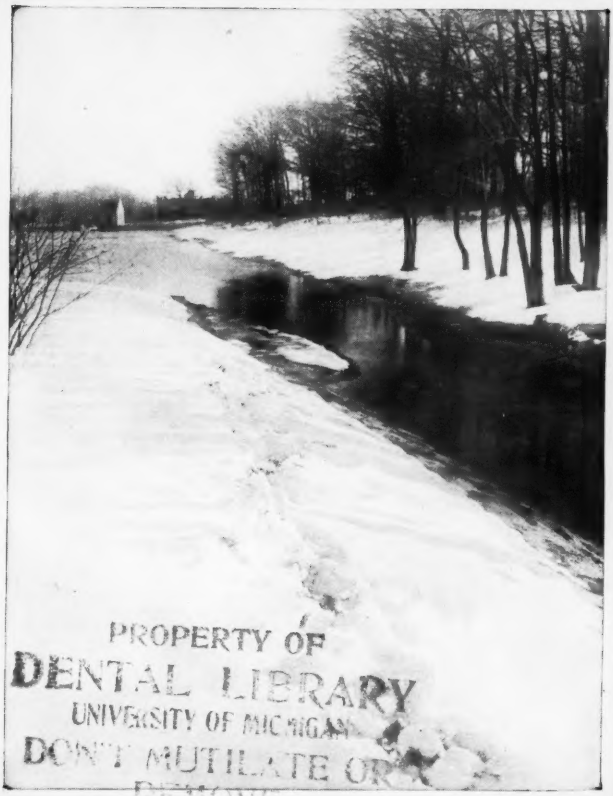
THE DENTAL DIGEST



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GEORGE WOOD CLAPP, D.D.S., EDITOR
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HARTFORD, CONNECTICUT U. S. A.

THE
DENTAL DIGEST

Vol. XXXIII MARCH, 1927 No. 3

Bridgework and Removable Dentures

By Robert Eugene Payne, M.D., D.D.S., San Francisco, California

CASE REPORTS WITH MODELS

CASE 1

Mr. K. H., hotel manager, about 50 years of age.

Upper left lateral and first and second bicuspids were dead. All three teeth had porcelain crowns, carefully fitted and in good occlusion. The teeth had been in good condition for more than ten years, and no soreness was present at the time of extraction. X-rays showed a very slight dark zone at the apex of the bicuspids and a more extensive one over the lateral. The lateral had been crowned about two years and, previous to this, had been filled with synthetic porcelain. Under this filling the pulp died and a fistula developed. The tooth was treated and a porcelain crown fitted at the request of the patient, as the upper arch was entire, no teeth having been extracted, and the patient objected to bridgework if it could be avoided at this time.

This patient visited his physician for slight rheumatic pains on the right side, which he considered very trivial, and he was advised, after x-rays had been taken, to have the three teeth removed.

As he was holding a position where he met the public constantly, I made a small plate the day after the removal of the teeth so as to make him presentable during the time the removable bridge was being constructed. The plate fitted so well that there was no evidence of the loss of teeth, and he insisted that a bridge be made that would show no gold and would look as well as the plate. He objected to the grinding of the natural teeth in any manner necessary to fit a fixed bridge.

Technic. The teeth are oiled, an impression is taken with complaster, and the complaster is placed in cold water for a few minutes. The teeth to be used in making the clasps for retention for the removable bridge are filled with artificial stone mixed thick. This is painted in the impression with a brush and packed snugly with slight pressure, filling the impression of the tooth only. In this case the cuspid and the first molar only were filled in this manner. This stone is allowed to harden for four hours and then is placed in cold water in a pan and allowed to come to a boil until the complaster is entirely removed.

The casts are dried and slightly warmed, and 30-gauge pink casting wax is used to cover the tooth and is allowed to adhere to the cast tooth. Then it is trimmed to the shape desired for the clasp. Two layers of this wax are applied and trimmed with the greatest accuracy. Distally, and near the gum margin on the cuspid, a drop of warm wax is added to attach the sprue. The sprue is warmed by placing it in a flame for an instant and, when inserted in the wax, melts the wax at that point and is held until hard.

The cast tooth and the wax in place are now placed in cold water, ready for the investment ring.

A cast-clasp investment is mixed to medium-thick-cream consistency and is well whipped. This investment is painted on the wet wax and the stone tooth with a camel's-hair brush, the ring filled, and the investment completed. This is allowed to set for an hour before any attempt is made to dry it out. It is dried out slowly and an asbestos ring is placed over the investment and heated until red.

Cast-clasp gold is used for casting the clasp, being allowed to become cold before the investment is removed after casting.

The clasps are trimmed and polished and fitted to the teeth. This is an important step, as no saddle could be used in this case on account of the recent extraction of the teeth and the shrinkage of the gum. It may be necessary to make the clasps over in order to get a perfect-fitting clasp, and they must be perfectly seated before the work is continued. Having fitted the clasps perfectly, take a bite and an impression with impression compound, allowing it to become very hard before removing.

The clasps must be seated in exact position at the bottom of the impression and bite. I have tried everything, and this is the most reliable and accurate method if all precautions are taken in its use.

Fill this upper impression, containing the clasps in position, with artificial stone and allow it to set for four hours. Then mix plaster of Paris, place the stone in the plaster and trim it for a plaster articulator. Fill the other side, the lower teeth occluding, with plaster of Paris. When well set, warm slowly over a flame until warmed through, and separate the casts.

In this case I selected two tube bicuspids to fill the space. I ground away the inner surface of the teeth, the upper half of the porcelain to the tube running through the tooth and a little next to the clasp, to allow a flange to extend upon it.

Wet the teeth and mould the cast wax to the ground portion of the teeth. Select a sprue that will pass through the tube in the bridge tooth. This sprue must be twice as long as the usual sprue. Warm this slightly and pass it into the wax through the tube in the tooth. Hold it until cool. If the tooth is still moist, it can be readily dislodged and

placed in cold water, ready for the investment and for casting in the same way the clasp was cast, hot, then cooled slowly.

Fit these cast backings to the teeth and grind and fit the teeth to the gum and occlusion. Grind the porcelain at all points to get perfection in adjustment to the occlusion and correct position and appearance of

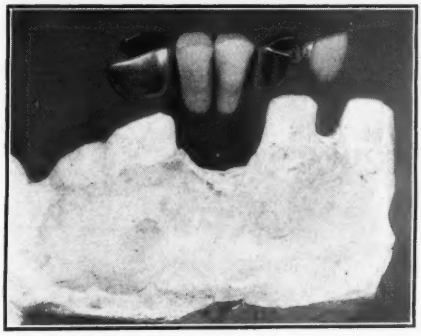

Fig. 1
Cast of case with bridge ready for adjustment. (Case 1.)

Fig. 2
Bridge fitted on cast, showing occlusion, position of clasps and tube teeth cemented to bridge. (Case 1.)

the teeth from every point of view, as you can readily polish all ground surfaces, restoring the gloss when completing the bridge.

Tube teeth are very hard and tough and, within reason, will stand

any manipulation to secure results. They have a wide range of use, as the dentures herein described will prove, and there are other ways in which they may be utilized to replace missing teeth with the desired natural appearance.

You will notice in this replacement of three teeth held by two cast clasps without a saddle that the clasps are wide and thin, yet rigid and strong. (Figs. 1-2.) The molar clasp is hidden by the lip, and the cuspid clasp is extended to the gum at the back of the tooth, lapping over the distal aspect of the cuspid and yet out of sight when the bridge is in position.

This removable bridge is worn with perfect comfort and, without exaggeration, is as useful as any teeth in this patient's mouth.

Case 2

Miss I. S., about 25 years of age.

Teeth replaced—upper right second bicuspid and first molar—had been out about five years.

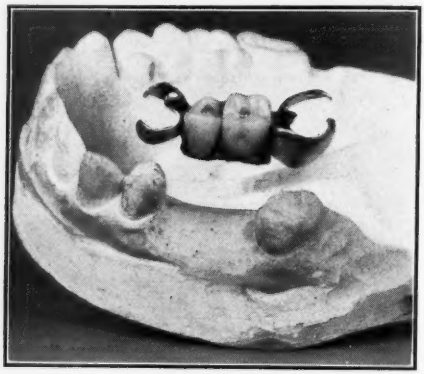

Fig. 3
Cast of case with bridge ready for adjustment. (Case 2.)

Technic. The clasps are made in the same manner as in Case 1. The saddle is made by using a wax sheet fitted to the model. The bases for the tube teeth are cast after the teeth have been ground in position on the saddle. The backings are soldered to the saddle before assembling.

The cast clasps are fitted to the molar and the bicuspid, and the saddle, with backings, is soldered in position, fitted to the gum, with the tube teeth in place on the saddle, to prove the occlusion.

The impression is taken with the teeth on the saddle, held in place

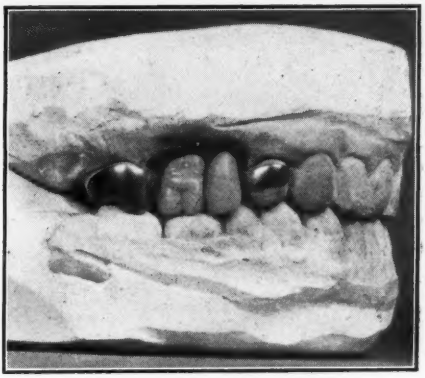

Fig. 4

Denture in position on model ready to be placed in mouth, showing the occlusion, bite and adjustment of clasps, saddle and teeth. (Case 2.)

by the nurse. The impression with the assembled parts, viz., teeth, clasps, and saddle, all held in place, are now poured with the investment.

Separate the impression, cast, remove the porcelain teeth, and add to the investment already holding the assembled parts in a manner to permit soldering the clasps to the saddle, and then the case is ready to finish. (Figs. 3-4.)

Case 3

Mr. J. S., about 60 years of age.

He had used tobacco for years and had worn down the natural teeth nearly half their length. The teeth remaining, two cuspids, were alive and very firm and in perfect health. Knowing the disadvantages of a lower plate, he desired to retain these teeth to hold a denture in place.

Technic. A band is fitted around the two cuspids and a flat top soldered to each. These are cemented in place and two seamless gold crowns fitted over these caps.

Bases are cast for the molars and the bicuspids.

Backings are cast on the pins of the four front teeth and all are assembled in wax on the cast and united.

The gold crowns are cut out at the top and a synthetic porcelain filling to contour the cuspids is placed in this opening. These crowns telescope the caps snugly to hold the denture in place. (Figs. 5-6.)

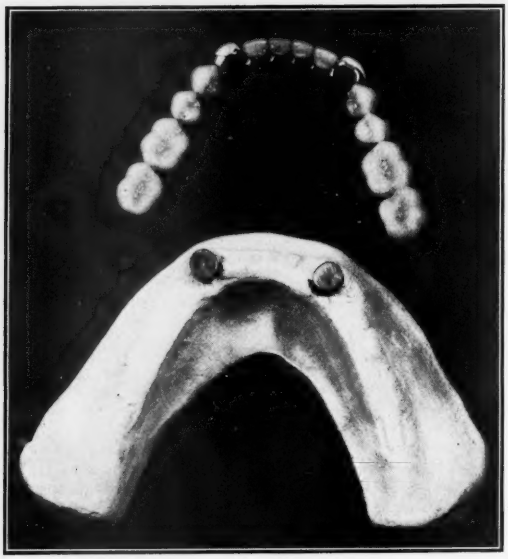

Fig. 5
Cast with caps in position and finished denture. (Case 3.)

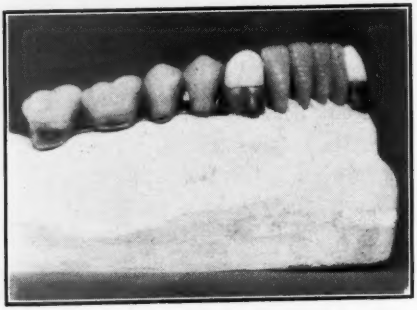

Fig. 6
Full lower denture, fourteen teeth, in position on the model. (Case 3.)

Case 4

This is a model case to illustrate the use of tube teeth in a fixed bridge or in a removable bridge with a saddle.

Technic. Two gold seamless crowns are fitted to the cuspid and first bicuspid on the upper right side. The two gold crowns are united with

solder. They are fitted in place in the mouth, and a bite and an impression are taken in one in modeling compound.

Tube teeth are selected and cast bases and pins adjusted and assembled, as shown in the finished bridge on the model.

At the end of the bridge, since there is no tooth to hold the denture, a very small saddle is fitted to the gum, and this is added to the bridge.

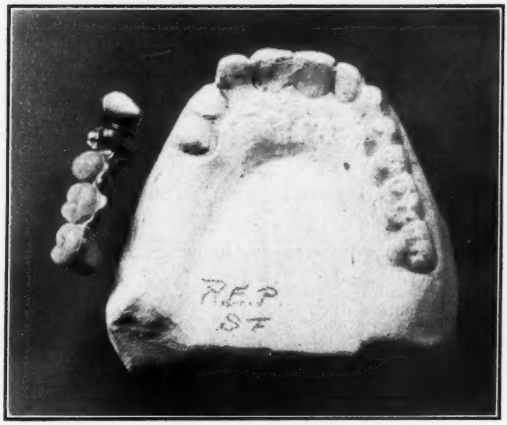

Fig. 7
Model of case and finished bridge. (Case 4.)

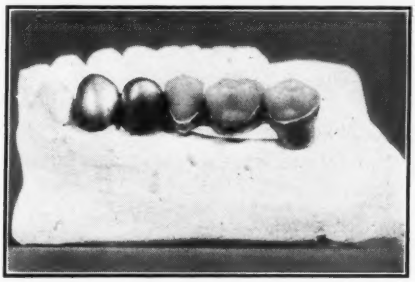

Fig. 8
Bridge in position. (Case 4.)

Now the two gold crowns, which have been united, prevent any lateral movement, and if the saddle is accurately fitted and the edges are beveled to prevent sharp edges, the denture will give satisfaction. (Figs. 7-8.)

The gum is firm and hard at this point, and there is no irritation

of the gum in the many cases that I have put in. The appliance cannot be used except in healthy mouths with firm gums, but the comfort with which these dentures are worn is surprising.

The argument used by the dentist who has not tried this method is that the leverage on the teeth will set up an irritation, but the fact remains that this does not occur. I have put in many during the past five or six years, and they are sanitary, useful and cosmetic.

Advantages of Tube Teeth

The advantages of tube teeth might be summed up as follows:

(1) A correct, anatomical, porcelain-cusp tooth.

(2) A hard, tough, non-breakable mass of porcelain that can be ground and polished to the original lustre of the enamel.

(3) Cast backings are easily made and fit accurately without fracturing the tooth.

(4) The tooth does not require heating in making a denture.

(5) The pin adjusted to the tube is of good length to hold the tooth in place when cemented.

(6) It is more natural for this work than any other tooth.

(7) Good stones and wet grinding will quickly adjust it to the gum and occlusion.

The foregoing technic, once carried through to a finish, becomes easy.

A nurse can be trained to aid in a part of the work in the laboratory and can do it exceedingly well, as the casting of bases or backings, polishing the ground surfaces, etc.

Conclusion

Ideal dentistry would be the prevention of decay instead of the patchwork that we are compelled to do. The best we can do is to fill the teeth early for prevention, clean the teeth for prevention, exercise the teeth for prevention, and increase their resistance by exercise, fresh air and plain food.

Market and Fourth Streets.

Preventive Orthodontia*

By Frederick Lester Stanton, D.D.S., New York, N. Y.

Occlusion is important in every branch of dentistry. In operative work, fillings and bridges must be inserted with due regard to their contact with approximating and opposing teeth. In periodontia, occlusion is of the greatest importance, otherwise there may be an incurable pyorrhea due to traumatic occlusion. In denture prosthesis, occlusion is the basis of the art, as proved by the number and variety of articulators that have been devised. Hence we see that occlusion is fundamental.

Preventive orthodontia may be said to be the detection and correction by scientific methods of small deviations from the normal that would escape ordinary observation. If these abnormalities are allowed to go unheeded, then very grave results are certain to follow. Cases

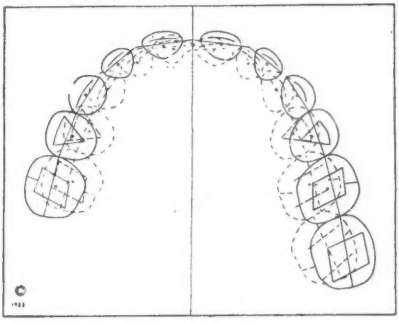

Fig. 1

The dotted line shows the map of the original model. The solid line is the predetermined arch to allow space for the four permanent incisors.

should be seen as early in age as possible, as a general rule from 4½ to 5½ years.

At the age of 5½ years there should be spaces between the anterior teeth. If these are not present and the cases are left untreated, there will be only 1½ millimeters of expansion at the most as time goes on, when there should be about 7 millimeters. The lack of development is always to be found anterior to the first permanent molars, and generally in the temporary molar region.

The first permanent molars may come in at the proper width for the arch, but they are drawn in contact with the second temporary molars and consequently become rotated. Very frequently a case which

* From a clinic given before the First District Dental Society, New York, December 8, 1926.

may seem to be in distal occlusion will become normal when the anterior part of the arch is expanded and the first molars rotated into their proper positions. By the ordinary means of diagnosis it is often very difficult to tell which molar, if any, is rotated, but by the use of surveying instruments that I have designed, which give superimposed maps of the two arches, this and other malpositions may be easily detected.

Unless there is expansion in the temporary molar region, the permanent anterior teeth upon eruption will either overlap or fan outward. This as a rule deranges also the mesio-distal relationship of the first molars.

The first operative procedure is to get the proper expansion in the temporary molar or permanent bicuspid region. In a great many instances this will bring the first permanent molars into their correct

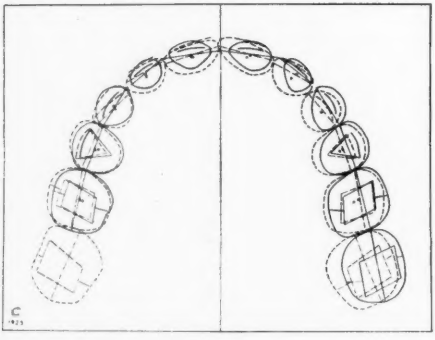

Fig. 2

The dotted line shows the map of the case after using the automatic expanding device. The solid line shows the predetermined arch, as in Fig. 1.

position. It will also be found that very often the correct mesio-distal relationship of the two jaws has been established.

All parts of the head and jaws are engineering structures with every brace and strut arranged to meet the forces put upon them. The changes in the positions of the teeth are registered in these structures.

The point to be emphasized is the fact that the worst cases of malocclusion generally have an insignificant beginning, so insignificant that the eye alone fails to diagnose them.

Means have been devised by which the jaws may be surveyed and maps plotted to show the exact position of each cusp in its relation to those of the opposing teeth. The exact position of each tooth in its relation to the others is accurately shown and the whole is enlarged so that any deviation from the normal is instantly noticeable. In this

manner the beginnings of malocclusion may be detected and interference instituted before the case has gone too far. But, as has been stated before, the patient must be seen at an early age.

121 East 60th Street.

A Consideration of the Pulpless Tooth in Focal Infection*

By H. J. Kauffer, D.D.S., New York, N. Y.

There are hundreds of thousands of individuals with periapical infection who show absolutely no sign of secondary systemic infection. Grieves examined a great many radiographs and found that a very large

Fig. 1
Negative reaction

percentage of the pulpless teeth with incomplete root canal fillings showed no evidence of periapical bone changes.

The question arises as to why a non-vital tooth does not infect the surrounding tissue in one person, while in another it causes extensive periapical infection. The answer is found in the degree of the re-

* Report of a clinic given before the First District Dental Society, New York, December 7, 1926.

sistance and immunity of the host. A means of determining this immunity would be of the greatest value. It would save the ruthless extraction of teeth that were doing no harm, and also prevent long treatment with ultimate failure for teeth which could not be saved with safety to the patient.

This is done by a skin reaction such as is used by physicians in the Schick test for diphtheria and the Dick test for scarlet fever. A culture is obtained from the chronic periapical infection and from it is made a saline suspension containing five thousand million of the dead organisms and their proteins to the cubic centimeter. As a control, two one-hundredths of a cubic centimeter of the saline solution minus the organisms is injected into the arm. A few inches away, two one-hundredths of a cubic centimeter of the saline suspension of the organism is also injected. The control should become neither inflamed

Fig. 2
Positive reaction

nor tender other than a slight redness which may appear at the sight of either injection but which disappears inside of six hours. This is considered negative (Fig. 1).

In patients sensitized to the protein, an urticarial wheal will form in five to fifteen minutes. When there is little or no immunity, a decided redness will appear, varying up to two or more inches in diameter (Fig. 2). There is tenderness, and there may be sloughing of the skin.

It is useless to attempt root canal work on these cases, and the teeth should be extracted.

At the Vanderbilt Clinic it was found that more than sixty per cent of the patients over thirty years of age had infected teeth, but the majority of those patients showed no constitutional evidence of infection.

Tests have also been made, when a granuloma has come away with the tooth, by resecting the granuloma and putting it in a sterile saline solution. An injection was made with the suspension of organisms obtained from the granuloma, a second with the contents of the granuloma, which had been rendered sterile by heat, and a third with the saline solution in which the granuloma was suspended. So far the tests have all given the same result except for a variation in intensity.

Because of the large variety of organisms found in periapical infections, stock vaccines are of no value for vaccine therapy. Only autogenous vaccines can be used.

Cultures are made whenever possible by way of the root canal.

If a patient shows no reaction to the organisms in the periapical infection, it does not seem probable that any secondary infection is of dental origin, and the dental infection should be treated and cured without fear of danger to the future health of the patient.

2 West 72nd Street.

PERCY HOWE'S LETTERS
In Collaboration with "Brother Bill"

Third Letter

(The dentist responsible for the office care of the teeth of the children referred to in the first two letters writes to Dr. Howe and in reply gets some new ideas and a new slogan.)

My dear Doctor:

I have read your recent letter with interest, because it is just such a letter as I might have written under similar conditions and might write even now but for what I have learned from studies into the causes of decay of the teeth upon which I have been engaged since 1890. You say that you have had the care of the teeth of the B— children for some years, and that the parents are well-to-do, unusually intelligent and keenly interested in the welfare of their children. You have kept the teeth clean, as we generally use that term, and have had good support from both the parents and the children. In spite of this, the white spots to which the mother referred have appeared upon the labial surfaces of the upper incisors and the upper left lateral has broken down. Prior to the breaking down, the enamel over this spot was perfectly smooth and apparently solid, as it still is on the other teeth. It went all at once. At one visit there was smooth enamel; the next time you saw the patient there was a cavity. You fear that the other spots will break down in the same manner.

Mrs. B— has given you the two letters I have written her. In spite of what has happened and is likely to happen, it is very difficult for you to accept the theory I put forward—that her children may be suffering from some nutritional deficiency, and that the spots may be "deficiency spots." You have been taught to believe that there is no circulation in adult enamel, and that it cannot be reached from within for either harm or good, but can be attacked only from without and must then depend upon its inherent strength for resisting power. That belief has led to the organization of prophylaxis on three foundation stones—cleaning, polishing, massage—and to the slogan, *Clean teeth do not decay,* meaning clean in the usual and not in the surgical sense.

And now I write that there is reason to believe that enamel is something more than a bundle of calcified rods glued together; that it has an organic matrix and probably some form of metabolism and can be reached from within;* that it may be affected by serious nutri-

* This view is supported by Gies, *Journal of National Dental Association,* May, 1918.

tional deficiencies to such an extent that it may break down without attack from outside or cannot resist such attack; and that it may be possible, by maintaining nutritional balance, to strengthen the enamel against attacks from without. In the light of these statements and the evidence I propose to offer you in support of them, I propose for our profession a new and better slogan—*Healthy teeth resist decay; sick teeth invite it.*

If these beliefs of mine can be supported by incontrovertible evidence, they put a new face on the whole problem of the protection of the teeth and they open to the dental profession the greatest opportunity it has had, in my time at least. They make it possible for the dentist to become a diagnostician and adviser whose services will be of unexcelled value.

The deficiencies which manifest themselves in the dental apparatus of the child are generally, in part at least, results of deficiencies in the diet of the mother before the child is born and wrong feeding of the infant. It is more and more the duty of our profession to take care of the dental condition of the expectant mother. The diet which will protect her teeth against the heavy demands of the period is the very diet to supply materials for the bones and the teeth of the foetus. We have opportunities to tell our story again and again and to link it to the health of the mother at the time and to the health of the child in the future. We should be able to suggest the diet which, in normal cases, will meet all her food requirements.

More and more children are being brought to us for dental care when very young, and this practice will increase. We should be able to diagnose at least serious deficiencies and, in cases where there is no reason to suspect pathological conditions, to indicate to mothers the simple diet necessary to correct the deficiencies which occur most frequently. Against the period of susceptibility, which very often occurs around the age of eighteen, when many mouths show sudden, serious attacks by "white decay," we should be able to establish high resistance with correct diet. And, as I hope sometime to show you, we should be able to increase the resistance to periodontal debility and resorption on the part of many adult patients. Every increase of resistance against oral disease must be also an increase against systemic disease. Was it something like this which Dr. Charles Mayo had in mind when he said that the next great advance in medicine would come from the dentists and wondered whether we would take it?

You probably believe in what is called the lactic acid theory of decay or the bacterial theory. Let me give you a brief and non-

Narrow, white, crescent-shaped lines appeared on both centrals, the left lateral and the right cuspid. These grew wider on all except the left central, and the one on the left lateral broke through in the manner described in the text.*

technical resumé of these theories. Prior to 1857, Pasteur showed that the transformation of sugars into lactic acid was dependent upon the presence of certain microorganisms. The wide application which was made of his theories may have suggested to Miller that fermentation might account for decay of the teeth, and he made some experiments to find out. In his book published in 1890 he tells how he placed extracted natural teeth in a solution of saliva and bread and renewed it from time to time to keep it acid. In from three to six months he got results which he and the dentists to whom he showed the teeth accepted as caries. Williams demonstrated that at least some of the lactic-acid-forming organisms in the mouth become glued together in the form of plaques, which adhere firmly to the teeth. Some of the acid secreted by the organisms is held between the plaques and the enamel, where it is protected from being diluted or washed away, and, working continuously, it dissolves the lime salts of the enamel with which it is in contact. When a cavity has been formed, the acid-forming microorganisms are even better protected and under the combined acid and bacterial attack extensive decay may take place. No one believes that there is sufficient free lactic acid in the saliva to

* Photograph by courtesy of Lyman A. Wilson, D.D.S., New York, although Dr. Wilson is not the dentist referred to in this letter.

attack all of the surfaces of the teeth at once, and it is a logical deduction from this theory that if we can prevent the attachment of the plaques, teeth will not decay except where there may be imperfect calcification.

In 1917 Miss Hatch and I, using various modes of cultivation, isolated from about 75 cavities in teeth several acid-forming microorganisms which we believed to be similar to the Moro-Tissier group. We immersed sections of natural teeth in cultures of the microorganisms and got decalcification, but we were not satisfied that it was the form of caries by which teeth are destroyed in the mouth. It appeared to us to be the same form of decalcification that we get by immersing similar sections in any dilute acid. Captain Rodrigues, U. S. A. Dental Corps, working with Hitchens in Washington, isolated certain strains of bacteria, immersed teeth in the cultures and got what looked to me like caries as it occurs in the mouth.

Unless what Rodrigues got in one or two teeth was caries, this half-century of experimentation by immersing dead teeth in fermenting solutions has absolutely failed to produce what I believe to be true caries. I repeated Miller's experiments upon many teeth and was never able to get what I believe to be true caries. This work was done with sufficient care to win favorable comment from *The London Lancet.* Miller was not satisfied as to the finality of his own theories. In his book he asked why the teeth of pigs, who live almost continuously upon a diet of fermenting food, are not subject to caries, but he did not answer his own question. He also called attention to the fact that in some cases where a cavity has been formed and acid formation and bacterial attack might continue under ideal conditions, the entire process stops and the dentin becomes very hard and apparently able to resist further attack. He might have called attention to the fact that many Oriental races, who live largely upon fermented milk, have fine teeth.

About three years ago, three English investigators, Sir James McIntosh, Warwick James and Lazarus-Barlow, working together, isolated a microorganism which appears to belong to the Moro-Tissier group, and to which they gave the name *Odontolyticus.* Later they fed this to animals to observe the effect on teeth. The results were negative, with the possible exception of slight caries in one monkey. This was not surprising to us because we had already made extensive experiments in feeding to a group of animals an organism which we believe to be identical with this one, and other organisms also, and had been unable to produce caries.

If the cavity which has formed on your patient's upper lateral were on the distal side of a badly crowded lower second molar, you

might say that lactic acid had been held in contact with the enamel by a plaque. But this cavity is on a prominent angle of the most prominent surface of one of the four most prominent teeth in the mouth. It is far enough from the gingiva so that it is scrubbed every time the lips move and food is bitten. You have cleaned it every few months, and it is too accessible not to have shared in the good care which you say the teeth have received at home. It is absolutely unthinkable that a bacterial plaque could form or lodge in such a place. You might say that acid got into the enamel through some defect and wrought the damage from inside. If you will examine the enamel over the spots on the other teeth with the most powerful magnifying glass you can get into position, I do not believe you will find any defect which would admit the acid for such destruction. Moreover, if you will examine the other teeth throughout the mouth with cotton rolls and hot air, you may find more such spots in places where no roughness of the enamel has indicated the onset of decay.

The attack did not progress as it probably would have from the action of acid. It is hardly thinkable that there could be a defect in the enamel so tiny as to escape your minute attention, and that down that defect fresh supplies of lactic acid would continually pass to bore from within until a considerable area of the enamel was undermined. It would be almost unavoidable that the acid would enlarge the inlet enough so that you could find it with the eye or an instrument. Yet nothing of this sort happened. Yesterday, so to speak, you had apparently firm enamel, somewhat discolored; today you have a fairly large cavity. There is apparently nothing wrong with the child except that he is some under weight and a little lazy. Certainly there is nothing that you or the family physician can put your hands upon. Your letter does not indicate that you have any reason to suppose that there is a greater production of lactic acid in this mouth than in the mouths of other members of the family where no such disaster has occurred.

Now let me call your attention to the predicament in which such an occurrence places you and to the profession of dentistry as a means of health and service. This form of trouble is not confined to that mouth or to your practice. Other dentists who are trusted by parents to maintain the health of their children are finding it and some of them think it to be increasingly prevalent among the well-to-do. One dentist recently reported twelve cavities from such spots at contact points of otherwise perfect teeth in one eighteen-year-old patient. The rapidity and the ruthlessness of the attack strike a kind of terror to many dentists' hearts. If you and the parents and the patients, working together, cannot protect the most prominent tooth surfaces in the mouth, which should be immune to decay practically without atten-

tion, how are you going to protect surfaces less favorably situated? And if five or ten cavities develop between visits to your office, how are you going to save the teeth? There are important disadvantages in polishing out these spots or in placing fillings.

This letter is already too long, so that I cannot offer you here evidence in support of the belief I have stated, but I will make one or two suggestions before I close. I do not believe that these spots are of fermentative or bacterial origin. I do not believe that the lactic acid theory or the bacterial theory goes to the root of the cause of caries. Acids and bacteria may play their parts when the internal condition of the tooth makes it possible for them to be effective, but rarely otherwise. I believe that when the nutritional balance of the individual is maintained at the proper level, teeth exhibit a high degree of resistance to decay, and that when there is a serious nutritional unbalance, the resisting power of the teeth is greatly reduced and attacks which would otherwise be powerless may be successful. If that unbalance is continued long enough, I believe that teeth may be practically destroyed from within. I believe that is what is happening to the teeth in the picture you sent me, and that when the nutritional balance is restored, the destructive process from within can be stopped and, if it has not gone too far, may be repaired. It is quite possible that you may do that with these other teeth if you will prescribe liberal quantities of fresh whole milk unpasteurized, orange juice and green vegetables. Keep the protein in the diet low. Excess protein in the diet of experimental animals is always a disturbing factor.

Oh, yes, I know what you would like to say! Thad. Hyatt said it when, in discussing one of my papers at Albany, he remarked that if these theories are right, we need a series of restaurants more than we do toothbrush drills. And he wasn't wholly wrong!

Yours respectfully,

Percy R. Howe

Will You Help to Get These Teeth?

Dr. Percy R. Howe needs some human teeth that have been only slightly affected by active decay, and in which the pulps are vital at the time of extraction.

Dr. Howe needs the following information about each patient from whom one or more teeth are sent:

Sex, age, approximate height and weight, occupation, and about the proportions of the following elements in his diet (given as "much" or "little"): meats, cereals, bread, fruits, vegetables, salt, condiments (meaning all relishes).

If you care to send such teeth, do not wash them, but drop them, immediately after extraction, into a 10% solution of formalin and mail to Dr. Percy R. Howe, 140 The Fenway, Boston, Mass.

If you have no suitable bottle or mailing case but can get such teeth, I shall be glad to send you both, on request.

Dr. Howe wishes to initiate some studies on pulps, and possibly on enamel, which are likely to benefit all of us.

GEORGE WOOD CLAPP.

First District Dental Society, New York

The First District Dental Society wishes to announce the establishment of its present office and meeting rooms in the new Academy of Medicine, 2 East 103d Street (corner Fifth Avenue), New York, N. Y.

We wish to invite all dentists who are visiting New York to make use of the facilities found at our office and the Academy of Medicine. Here is housed one of the largest medical and dental libraries in this country, situated in the most beautiful surroundings. A visit to this building is well worth while, as it is considered one of the show-places of the metropolis.

A complete file of all dental activities will be kept, such as scheduled meetings, clinics, courses in and around New York, as well as information on all subjects relative to the study of dental science, for both undergraduates and postgraduates. Lists of approved courses to be given in schools, clinics and by individuals will be available.

Mail may be addressed, care of First District Dental Society, 2 East 103d Street, New York, N. Y. The telephone is Atwater 7424.

JOHN T. HANKS, *President.*

Special Teeth for Cross-Bite Cases

By Alfred Gysi, D.D.S., Zurich, Switzerland

Professor of Prosthetic Dentistry, University of Zurich
Literary Collaboration by George Wood Clapp, D.D.S.

SECOND ARTICLE

EXPERIENCES WITH CROSS-BITE SET-UPS

In 1888 Frederick Wellauer, my preceptor, a dentist of Frauenfeld, Switzerland, began setting the bicuspids and molars in the cross-bite relation for cases showing extreme resorption. This was easily done in those days because the teeth were non-anatomical in form, had no definite cusp interdigitation, did not articulate and could be set in

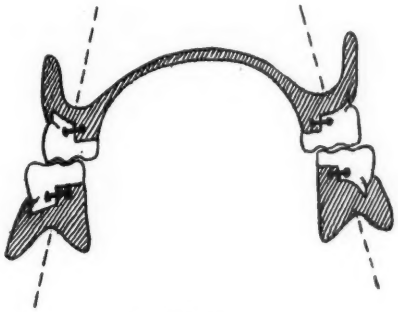

Fig. 1

Wellauer type of cross-bite teeth (1888), in which the buccal cusps of the maxillary bicuspids and molars occluded into the longitudinal groove of the opposing teeth.

one relation about as well as in another. He set the teeth so that the buccal cusps of the maxillary bicuspids and molars occluded into the longitudinal groove of the opposing teeth, as in Fig. 1. He did not incline the teeth in the direction of what I have recently named the *interalveolar crest line,* but he placed each set vertically upright upon its ridge. In cases of extreme resorption this left very little space for that portion of the tongue which projects above the level of the mandibular teeth. As many such cases had been without teeth for a long time and the tongue had spread laterally, this arrangement of the teeth often led to irritation of the tongue, which continually struck against the second molars. Most patients, however, preferred the cross-bite arrangement to the normal-bite arrangement, because with the former they could use a good deal of masticating force without tilting the plates.

In 1891 I had an unconscious perception of a theoretical interalveolar crest line, although I did not identify it. At that time, when making full maxillary and mandibular dentures for cases with well-marked resorption, I selected relatively wide and flat mandibular bicuspids and molars and set them, nearly upright, high above the crest of the ridge and a little toward the median line.

A Case with a Record of Failures

In 1900 a man came to the office who had lost all the maxillary teeth through pyorrhea. All the mandibular teeth were in place except the right second and third molars. The mandibular arch was wide. The maxillary arch had evidently been wide in proportion to the mandibular arch, because facets worn on the mandibular molars showed that he had once enjoyed normal-bite relations of the teeth. Resorption of the maxilla was excessive, so that the maxillary arch was very small in proportion to the mandibular arch. Many dentures had been tried for the maxilla, but these were failures because the dentists had attempted to establish normal-bite relations, which required the placing of the maxillary teeth far outside the ridge. Even slight masticating pressure dislodged these dentures. The patient had a long-standing diabetic complication, but his condition was made much worse by the fact that he had been unable to masticate satisfactorily for several years.

Using Five Maxillary Bicuspids

The necessity of constructing a maxillary denture that would bring the lines of masticating force close to the ridge and would not crowd the tongue in such way that the denture would be displaced led me to omit the maxillary molars and replace them with three bicuspids, making five bicuspids on each side above. These were occluded with the lingual halves of the lingual cusps of the mandibular bicuspids and molars. To make sure that the lingual cusps of the additional bicuspids did not tickle nor irritate the tongue, these cusps were ground extensively on the lingual aspect, as in Fig. 2. A diagrammatic cross-section of the dentures at the location of the mandibular first molar is shown in Fig. 2 and is accompanied by a side view showing the five bicuspids on one side of the maxilla. The denture constructed in this way was successful. The patient was able to masticate efficiently and comfortably and regained such health as his diabetic condition permitted. It is evidently better to have a narrow masticating surface that is moderately efficient than a wide masticating surface that is not efficient.

Moderate Satisfaction with Five Bicuspids

Guided by this experience, I thereafter replaced the two maxillary

Fig. 2

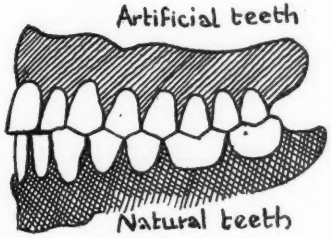

Fig. 2

Maxillary denture with all-bicuspid porcelain teeth on a narrow maxillary arch in cross-bite relation to the natural lower teeth on a wide arch (1900). Above is shown a diagrammatic cross-section of the dentures at the location of the mandibular first molar; below, a side view of the five bicuspids on one side of the maxilla.

molars with three maxillary bicuspids in cases where the maxillary arch was very narrow in proportion to the mandibular arch. For this purpose bicuspids with relatively flat occlusal surfaces were selected. These were set a little outside the crest of the maxillary ridge, nearly upright, in such way that whatever longitudinal groove they exhibited articulated with the lingual cusps of the mandibular teeth. This left the buccal cusps of the mandibular teeth with nothing to oppose them, as shown in the cross-section view in Fig. 3. Because the bicuspids were narrow bucco-lingually, they did not crowd the tongue nor irritate it. While dentures constructed in this way were not entirely satisfactory in lateral movements, patients could apply in the vertical and protrusive movements the maximum masticating force of which the plates were capable, but they were compelled by the narrowness of the maxillary occlusal surfaces to chew many more times than would have been necessary with teeth of normal form.

Extensive experience with dentures made in this way led me to prefer this *all-bicuspid* arrangement, in cases of extreme absorption, to the cross-bite arrangement of the normal-bite teeth then available.

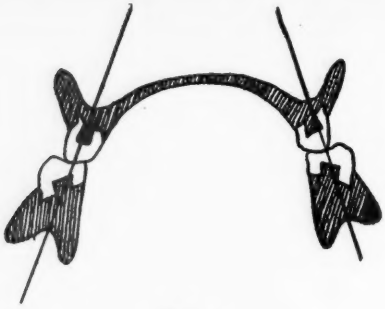

Fig. 3

Maxillary all-bicuspid denture in cross-bite relation to a mandibular molar denture made by Gysi in 1918, showing the buccal cusps of the mandibular teeth with nothing to oppose them.

The fact that these dentures, although better than any other arrangement of teeth available at the time, did not entirely satisfy my ideal led me to continue my studies in search of tooth forms which, in cross-bite arrangement, would be satisfactory in all movements of mastication.

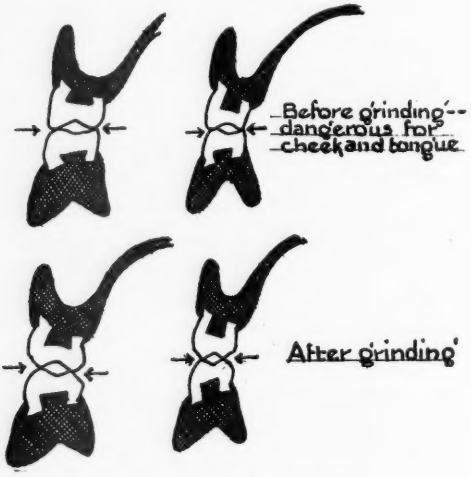

Fig. 4

These illustrations show the relations between the first molars and the second bicuspids, in central occlusion, at the point where the normal bite of the anteriors changes to the cross bite. Upper figures—before grinding; lower figures—after grinding.

Frequent Biting of Tongue and Cheek

When setting the old, non-anatomical forms of teeth to the cross-bite relation, there was always difficulty and danger at the point where the relation changed from normal-bite relation to cross-bite relation, because at this point there were no overjets by either set of teeth, and the cheek or tongue, or both, were bitten whenever the patient used the teeth in direct opening and closing movements. This could be overcome by grinding away the buccal cusps of the mandibular teeth and the lingual cusps of the maxillary teeth at the crossing point. This condition before and after grinding is illustrated in Fig. 4. Very few dentists ground the teeth in this way, and it is quite probable that the failure of their efforts with the cross-bite relation was on this account.

Transposing Anatomical Teeth to Cross-Bite Teeth

After the normal-bite teeth which I carved in 1913 became available, it was possible to obtain fairly satisfactory results, in cases where the resorption was not too great, by placing the bicuspids and molars which were intended for the right side of the maxilla on the left side of the mandible and those which were intended for the right side of the mandible on the left side of the maxilla, of course transposing the rest of the bicuspids and molars from left to right in the same way and leaving out the maxillary first bicuspid on both sides. When the resorption was very marked, this arrangement left insufficient room for the tongue, because the teeth on the mandible had to be moved inward to articulate with the teeth on the maxillary ridge. When permissible, this arrangement of these teeth was more advantageous to patients than any former cross-bite articulation, because patients were enabled by the cusp formation to make proper lateral movements in mastication.

(*To be continued*)

Oral Surgery In Practice

By Dr. James L. Zemsky, New York, N. Y.

Attending Surgeon, Department of Oral Surgery; Chief of Clinic and Director, Surgical Periodontia Department, Midtown Hospital, New York

Diagnosis (*Continued*).

Angioneurotic Edema, Acute Alveolar Abscess, Acromegalia, Emphysema

¶39. It must be remembered that a swelling on the face and neck is a symptom common to various lesions, some of which are: alveolar abscesses, cysts, maxillary sinusitis, fractures, osteomyelitis, neoplasms, lymphadenitis, syphilis, parotitis, tuberculosis, acromegalia, Hodgkin's disease, obstruction of salivary glands, post-operative edema, angioneurotic edema and several other pathological conditions; therefore every possible means should be used for the differential diagnosis of lesions presenting such swellings. (See Figs. 87-94.)

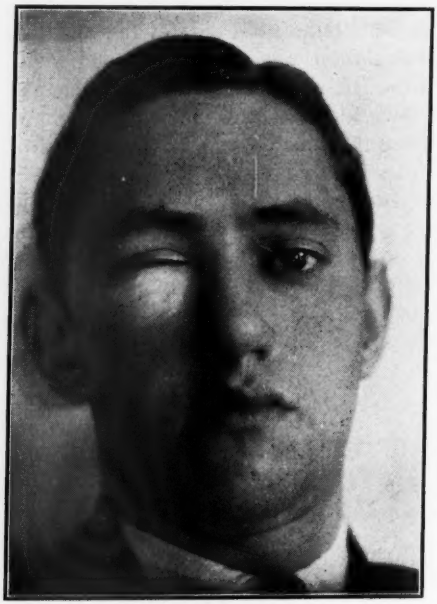

Fig. 87.

Photograph of a patient presenting a swelling of the right eyelid and involving that side of the face. Roentgenographic examination was negative; clinical examination of the mouth was negative. The swelling, therefore, was caused by other than the oral conditions.

History of the case revealed that the edema had occurred

many times before and had subsided of its own accord. This, together with the absence of any pathological condition of the oral structures, led to a diagnosis of *angioneurotic edema*, the treatment of which is beyond the scope of the dental practitioner. (See ¶39.)

Fig. 88

Fig. 89

Figs. 88-89.

Photograph of a patient (Fig. 88) presenting a swelling involving the upper lip and accompanied by fluctuation of the labial fold, a loose central incisor and a flow of pus around this central. The history indicates that the condition was preceded by severe toothache. Diagnosis—acute alveolar abscess. This condition can easily be differentiated from the disease of the patient shown in Fig. 89 called *angioneurotic edema.* (See ¶39.)

While the swelling of the lip in Fig. 89 closely resembles the swelling of the lip presented by the patient shown in Fig. 88, the condition is different. There is no pain, the swelling is of a transitory nature and is regarded as a form of sensitization to certain proteins. (See ¶39.)

Fig. 90.

Photograph of a patient, 60 years of age, showing marked edema of the right side of the face involving the lower lip and the right eye. The history shows that a similar swelling occurred a few years ago, soon subsiding only to reappear later. It recurs twice or three times a year regularly. No pain accompanies it at any time. Patient has been treated with x-rays and thyroid extract without any good results. A strict regime seems to be beneficial. Roentgenographic examination of the mouth was negative. The condition has been diagnosed as angioneurotic edema, which disease is characterized by the periodic appearance of the edema. (See ¶39.)

Fig. 91.

Photograph of a patient, 24 years old, presenting marked enlargement of the bones of the face, particularly of the lower jaw. The size of his hands and feet are out of proportion to the rest of the body, due to enlargement of their bones and soft parts. It is a chronic disease, caused by abnormal function of the pituitary body. (See ¶39.)

Fig. 92.

Another view of the same patient as in Fig. 91, showing the protrusion of the mandible and the degree of malocclusion due to it. (See ¶39.)

Fig. 93.

Photograph of a boy, 16 years old, presenting a large edema of the left cheek. The skin is movable on the subjacent swelling, which pits upon pressure and gives a crackling sensation. The history indicates that the swelling followed the removal of a maxillary second molar on the affected side. Roentgenographic examination of the maxilla was negative.

Operative procedure consisted in making an intra-oral incision into the swelling and breaking up the tissues with a round-nosed hemostatic clamp. No pus nor any other fluid was found; instead, air was expelled when the skin was pressed. Patient made an uneventful recovery. (See ¶39.)

Fig. 94.

Photograph of the same patient as in Fig. 93, taken when the swelling had almost subsided. It still shows pits caused by pressure upon the skin. (See ¶39.)

Topography of Swelling

¶40. Swellings on the face in the area above an imaginary line drawn from the angle of the mouth to the lobule of the ear are usually produced by some lesion in the upper jaw. The cause of swellings situated below this line ordinarily is to be found in the lower jaw, while a swelling diffused through the entire side of the face suggests infection in the soft tissues, not infrequently produced by injections of novocain when the technic is faulty, or when asepsis is not strictly adhered to. (See Figs. 95-99.)

Fig. 95.

Photograph of a boy, 13 years old, presenting a swelling of the right side of the face. The situation of the swelling indicates that the cause of it must be located in the maxilla. An inspection of the teeth on that side of the jaw disclosed no apparent pathology, but a roentgenogram of the osseous structures on the affected side revealed the condition as shown in Fig. 96. (See ¶40.)

Fig. 96.

Roentgenogram showing an unerupted canine with a radiolucent area extending from the apex of the temporary canine over to and involving the crown of the unerupted tooth. The

condition was found to be due to infection emanating from the apex of the temporary canine, the pulp of which was killed by trauma.

A swelling of the face situated above an imaginary line drawn from the angle of the mouth to the lobule of the ear suggests a pathology that caused the swelling to come from the upper jaw. (See ¶40.)

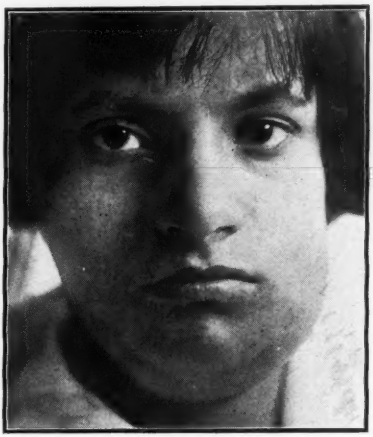

Fig. 97.

Photograph of a girl, 9 years of age, presenting a swelling of the face apparently due to a disturbance in the mandible. Clinical examination failed to disclose its cause, but a roentgenogram of the swollen side, as shown in Fig. 98, revealed that the cause of the swelling was in the mandible. (See ¶40.)

Fig. 98.

Roentgenogram showing a retained root of the temporary second molar. This was surrounded by a radiolucent area indi-

cating rarefied bone and an area of infected tissue in this region. The bud of the erupting second premolar also is involved.

A swelling of the face located below the line drawn from the angle of the mouth to the lobule of the ear indicates that the cause of it is in the lower jaw. (See ¶40.)

Fig. 99.

Photograph of a 15-year-old boy presenting a swelling, diffused through the entire side of the face, which is not indicative of either the upper or the lower jaw infection. The history tells that the patient had a maxillary molar removed under a local injection, which seems to account for the swelling. Usually infection due to local injection results in a diffused swelling not typical of any particular jaw infection. (See ¶40.)

¶41. It is well to think of neoplasm, tuberculosis and syphilis when examining a case presenting sloughing and ulcerating surfaces.

¶42. Scalpel, scissors, curette, rongeurs should be included in the examining outfit. Removal of a bone fragment, as well as the excision of a portion of soft tissue from a growth for a microscopical examination, is often indispensable for rendering a diagnosis,

¶43. Alcohol lamp, slides and platinum loop should not be omitted when a condition presenting suppurating and sloughing surfaces is examined. The only certain means of determining the character of infection is to collect the specimens and examine them under the microscope.

¶44. Transillumination is of considerable value in clinical examination, and the possession of an outfit for this purpose is desirable. Transillumination is particularly helpful in examining the antrum. Not infrequently diagnosis of maxillary sinusitis may be made solely from such an examination. History and roentgenogram should be carefully considered, however, before the final diagnosis is made.

¶45. Trismus which is not due to some recent oral operation, is often caused by an infection absorbed from a partly erupted wisdom tooth pocket (pericoronitis). (See Fig. 54.)

¶46. The cause of vague and diffuse pain is often found in a tooth with a porcelain filling regardless of how small the filling may be. In such cases roentgenograms prove to be of great help. (See Fig. 73.)

¶47. If swelling of the cheek in the submaxillary or submental regions increases during meals, presence of calculus in one of the salivary ducts should be suspected. A roentgenogram helps to confirm the diagnosis, as does probing of the ducts also.

Palatal Swellings

¶48. Upper lateral incisors are almost invariably responsible for swelling on the palate. (See Figs. 100-101.)

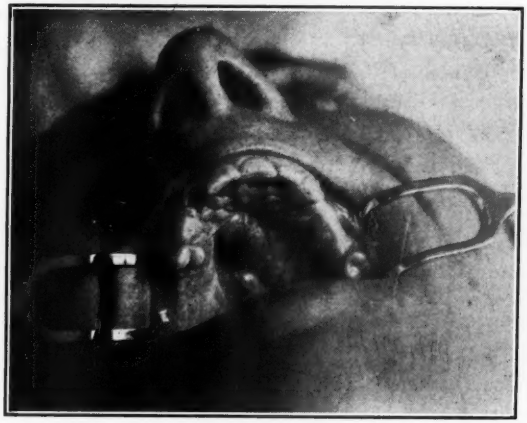

Fig. 100.

Photograph showing an acute abscess on the hard palate caused by an infected lateral incisor. (See ¶48.)

Fig. 101.

Photograph showing a swelling on the hard palate caused by a cyst developed in the maxilla. This is due to a broken-down, infected lateral incisor. (See ¶48.)

¶49. When an egg-shell crack can be elicited in palpating a swelling of the upper or the lower jaw, it is diagnostic of a cyst.

¶50. Eminence on the palate, with a tooth missing in the arch, is suggestive of an impaction or an uneruption. A roentgenogram should always be resorted to in such cases.

¶51. Loose teeth are not always pathognomic of pyorrhea; malignancy and osteomyelitis must be kept in mind.

¶52. Acute lymphatic leukemia is occasionally mistaken for hemorrhagic gingivitis. To differentiate these lesions, a blood examination should be made.

¶53. In taking a history, careful inquiry should be made as to whether the patient did not at one time or another meet with some accident that might possibly have caused a fracture of the jaws. Often fractures occur as the result of a very slight violence of which even the patient may be unaware.

¶54. Cases of fractures which result from a very severe direct violence must be very carefully examined. The mere location of *one* fracture is not sufficient; there may be more than just that one.

¶55. In fractures of the maxilla, the cardinal symptom, crepitus, may not always be elicited. There are also cases in which no mobility nor deformity is present, and even a roentgenogram may fail to dis-

close the fracture. Such conditions are difficult to rule out in making a differential diagnosis.

¶56. Extracting forceps should not be applied hastily to a tooth indicated by a patient for removal, for often it is the adjoining tooth that needs to be extracted. A roentgenogram in such cases is very helpful. (See Figs. 69-73; also, ¶30 and ¶34.)

¶57. Not infrequently a patient complains of pain in a tooth in either the upper or the lower jaw, while the cause of the complaint is to be found in a different tooth in the opposite jaw. Great care should therefore be exercised in determining the cause before extraction is attempted. (See Figs. 69-73; also ¶30 and ¶34.)

¶58. Unerupted and impacted teeth present an abnormal condition. This should be corrected either by orthodontic means or, if that is contra-indicated, by their removal.

¶59. A contra-indication for correcting the abnormal position of impacted and unerupted teeth is the presence of various symptoms whose etiological factors cannot be determined.

¶60. Maxillary sinusitis at times gives rise to symptoms greatly simulating a toothache. When this condition is present, extractions do not allay the pain, and the removal of teeth for this purpose is contra-indicated.

¶61. Severe pain and temperature do not always accompany Vincent's infection in the mouth. Sloughing of the gums, however, characterized by a destruction of intradental papillae leaving a grayish layer underlined by a red area, is almost pathognomic of this lesion. The presence of a large number of Vincent's Spirilla in such mouths makes the diagnosis of Vincent's infection (trench mouth) certain.

¶62. Ulceration of the mucous membrane of the gums, lips and cheek is not infrequently due to streptococci or staphylococci infection. A smear taken from the surface of the sore will disclose the type of infecting microorganisms.

¶63. Ulcers and patches on the mucous membrane of the mouth have not infrequently been observed to be merely sores, caused by biting upon it. Sometimes this is due to habit and sometimes it is done unconsciously during the period of anesthesia. In diagnosing, as well as in looking for the etiology of such conditions, this point should not be forgotten.

355 East 149th Street.

(*To be continued*).

Psychology and Dental Practice

By Charles I. Stoloff, D.D.S., New York, N. Y.

No doubt every one of us has had the unavoidable, unpleasant and noisy experience of an impatient, irate mother dragging a protesting though suffering child into the office for dental treatment. The mother, distracted by household duties, by other children perhaps and personal troubles, or simply domineering in an official parental manner, can hardly realize the unfortunate subconscious influence of such a procedure. Very frequently, as a fear-inspiring "bogey" for chastisement, a visit to the dentist is a whip that is used by this type of parent, and also by those who should be intelligently superior to such practice. Parents and other adults thoughtlessly discuss their dental pains and misfortunes in the presence of children, in whose minds such experiences are enormously magnified. As a result of such conditions, it is frequently very difficult to do dental work for children.

The treatment of an adult or a child who has not had previous unpleasant experiences, and whose mental state has not been disturbed by stories of the unfortunate dental experiences of others, must be done with particular care. One should remember that it is essential to obtain their shrinking trust and confidence, in view of the future work which may have to be done. Their future reactions depend upon their initial experiences. Thoughtlessness, carelessness and treatment which almost borders on brutality produce indelible, subconscious impressions which are retained through life.

Courageous men who have braved the most dangerous physical encounters, women who have no dread of the pains of child-bearing, people who profess to be disciples of creeds founded upon the control of mind over matter, these comprise a few of the great number of panicky adults who delay dental treatment as long as possible and approach it with dread.

It is only through careful and studious observation that we learn to control the various types of patient who call for dental treatment. Patience, kindness, thoughtfulness and gentle suggestion always accomplish more than compulsion. They serve to allay the fear which is so often attendant upon dental neglect. Compulsion should have no place in dentistry (unless perhaps as a last resort in the collection of delinquent accounts).

Experience teaches us that there is no universal method which can be applied to the handling of all patients successfully, as no two human beings are precisely alike or react in the same fashion. One thing which is absolutely essential at all times is the absolute confidence of the patient, since most restorative dental work is of such a nature as to

require prolonged treatment. A definitely outlined plan not only saves the time and energy of the operator, but produces in the mind of the patient the desired impression of capability. A discussion of the type of restoration and the expense involved is quite reassuring to the patient, especially if the explanation is made with the aid of study models and a complete set of x-rays. Confidence in the type of work advised impresses upon the patient the honesty of our intention to supply the best for that particular case.

Preparation should be made for any possible contingency, since emergencies arise at the most unexpected moments. A sympathetic and efficient-appearing assistant, who has been properly instructed, adds to the feeling of confidence and security.

Patients are impressionable to personality and the environment of the office, as well as to scientific efficiency. It seems almost superfluous to direct the consideration of professional men to the necessity of personal hygiene, but, unfortunately, in their concentration upon the big things many otherwise conscientious operators overlook such details as clean hands, clean and trimmed finger-nails, clean and neat hair, breath which is not foul, a clean-shaven countenance, and avoidance of any body odors or redolence of perspiration.

Clean operating gowns and linens for the assistant, operator and patient are as indispensable in a modern office as sterilized, polished instruments, gauze, and cotton rolls on clean trays. The operating room should appear as clean and dusted after the fifth or tenth patient as it does after the first. Since receptacles can be obtained for the reception of used cotton pellets, cotton rolls, gauze napkins and soiled linens, there is no excuse for their lying about. To secure confidence as to sterilization and cleanliness, instruments should be placed on the table while the patient is seated in the chair or, if prepared before, should be covered with a clean towel.

Since so many believe that "apparel oft proclaims the man," very careful attention should be given to the general aspect of the suite of offices. Average operating rooms are very much alike, except for the quantity and variety of equipment. The less the amount of unnecessary apparatus, the cleaner and more surgical the operating room appears. The furnishing of the reception room, however, gives the individual dentist an opportunity to display his esthetic qualifications. The reception room should be furnished as attractively as possible and in good taste. It should be soothing in effect and supplied with *up-to-date* reading matter. It is surprising how patients may be quieted and made to forget their dental apprehensions while waiting in a reception room of pleasant atmosphere, with dull, soothing lights, and with diverting reading matter at hand.

Let us assume that we have supplied the proper environment in

our offices, with modern equipment and the proper scientific training to render the required services. When patients present for treatment, we now encounter varied individual reactions to actual dental treatment. Each patient presents a different problem, with a mental state produced as a result of past personal experience or through the suggestions or impressions of others.

Since the specter of pain is the fear-inspiring factor in dental treatment, we should, whenever possible, work on vital teeth under local or conductive anesthesia. Modern methods of producing anesthesia have been developed to such a perfected stage that with average skill they can be utilized effectively without any untoward after-effects. Very frequently, due to the patient's apprehensions, the dentist is asked to "just patch a cavity," or to "just fix it any old way without drilling." These occasions present opportunities of being a "good fellow" but a poor dentist. Although patients temporarily think the dentist a wonderful person, eventually, when trouble reoccurs at the same point, they can hardly be expected to respect the dentist's professional ability. So, under ordinary circumstances, it is far preferable to be a good dentist than a "good fellow," even at the risk of causing slight discomfort to the patient.

Mystifying indeed is the psychology that must be employed in the universally successful collection of adequate remuneration for services carefully rendered. Unfortunately, no definite rules of economic conduct can be laid down.

Have you or your office staff ever been brought into abject submission to the commands for the most thoughtful, rapid service by some extremely bejeweled, overdressed patient who becomes indignant and offended at insistence upon payment of a long overdue, though just, bill? Have you ever encountered the type of individual who loquaciously expatiates upon his lavish and extravagant mode of living and then attempts to haggle about fees or asks for inferior dental work in order to save a slight amount of money? Have you ever been disappointed because effusive, glowing promises made by patients have been rarely fulfilled? And, then again, have you been most agreeably surprised at having patients referred by those who have said least and promised naught? Have you ever heard a patient boast about his or her extraordinary forbearance in permitting a specialist to "actually chisel and scrape the jaw" for a lengthy period and at a fancy price? And have you ever heard just such a patient grumble at an extremely moderate fee charged by a general practitioner, though the conditions were precisely the same?

How can such varied reactions be explained, and how therefore can one set down general rules and regulations for the handling of all patients? These are but a few citations of some of the experiences

that we encounter and must cope with. They merely prove that, to handle the average type of patient, we dentists must be excellent psychologists along with our technical, scientific and esthetic qualifications.

In the treatment of children, as well as of adults, kindness, gentleness and patience in conjunction with scientific skill will serve us faithfully in dispelling the fears attendant upon dental treatment. In treating those who have never had any previous experience one should remember the indelible and subconscious impressions which thoughtlessness, carelessness and brutality produce. Care and thoughtfulness will lessen the fear which is very often attendant upon dental neglect.

665 Fifth Avenue.

Life

Good morning, Life! Now will we walk together; my hand in yours, as lovers do. I shall not grumble at wild and stormy weather; happy to be companioned, Life, by you. Life! You shall lead me. See, I am quite ready. I shall not question, pressed against your side. Chin up, and smiling; eyes front, and courage steady; pleasant the journey, with you for my guide.

Steep be the incline? I shall still keep going; always at night is promise of sweet rest. Strong winds and hostile, these will be a blowing? Fear not, dear Life, but I will stand the test. Show me, I pray you, the footpath for my faring. Though it be rock-strewn, yet I shall not pale. Hard knocks? Sharp corners? Still I am not caring. Life, my true lover, I know will never fail.

When night's soft shadows stoop to caress me, then I will look with love in Life's brave eyes. Pray Life to keep me and guard me and bless me all through the night—till the new sun uprise.—*Exchange.*

Togo's "Discursions"

Mr. Editor of Slight Magazine seeking to make Dentistry Digestible.

Hon. Sir:

Expansive area and variegated extent of problems occurring in modern Dental Practice tend to create severe pains in great open spaces of all brains now endeavoring to adequately comprehend and solve same when encountered—which is frequently.

Only slightly obscured by distance is recent period of U.S. History when remarks similar to following were gleefully uttered as worth mentioning by any one who happened to think of doing so.

"Hon. Grandfather Gnasher was remarkable specimen—enjoying several natural teeth until sudden demise at age of 72. At present moment animated descendant of Forefather Gnasher, now experiencing Grandfatherhood in strictly limited quantities, appears in dental office demanding installation of beautiful new chewing and smiling equipment of 1927 model involving no display of gold and fully restoring all functions of steak-chewing, corn-gnawing and other facial sports not requiring enumeration. Thank you! This and many other requirements are due to growing comprehension of basic fact that age of individual is properly measured by careful survey of general physical condition and not by turning leaves of Hon. Calendar once per each annum.

Lessons observable where frail person of 25 delicate years becomes healthy and cheerful community leader at arrival of age sixty owing to prudent living and expert professional advice and attention are bearing fruit in all minds capable of clear thinking, and rational application of thought results to personal problem as presented.

Result of foregoing facts are perpendicular increase in proportion of patients capable of intense appreciation of highest type of professional advice and services when offered and delivered.

Single specimen of properly carved and contoured gold inlay placed in approximal cavity in molar or bicuspid tooth will often cause unfortunate possessor of mouthful of flat amalgam pancakes with well-known pantry shelf effect at gingival border to suggest desirability of duplicating comfortable results of such gold inlay restoration at all other points where indicated by obsolete amalgam discrepancies at present causing assorted annoyances. Installation of only one modern comfortable clean and efficient fixed bridge will often cause intelligent patient to postpone trading in used car on 1927 model and devote cash price of purchase difference to modernization of all other eating apparatus contained in countenance.

Changes in mental attitudes of Human Animals are easy to notice but impossible to really explain, Mr. Editor; intelligent reaction on part of Hon. Average Citizen including dentists is to be among first to observe such changes as and where occurring and then to make prompt and complete adjustment of personal affairs and services to conform to new ideas and demands as noted and existing.

Slightly developed brains at present deciphering problems of dentistry will greatly improve appearance of column devoted to net income figures of tax report by paying close and continuous attention to all available sources of information and enlightenment devoted to increasing prompt and proper production of gold inlays instead of amalgam fillings, porcelain jacket crowns instead of debilitated sympathetic corners, modern fixed bridges which make complete detour around gold crown abutments instead of partial plates, and sane and prompt sacrifice of teeth hopelessly diseased which by prolonged retention interfere with complete mouth health and full mouth function.

Hon. Public today demands tooth appearances of universal excellence undreamed of only twenty years ago. Dental profession and personal care are only practical sources for supplying such new demands (brainstorms of ad writers for tooth pastes, toothbrushes and mouth washes can be overlooked in spirit of charity in connection with foregoing statement), therefore let us accept such new responsibility and seek to discharge same in manner to inspire fresh confidence and increased cash balances as incidentals of enlightened scientific and conscientious services.

Hoping you are the same,

Togo.

An Honor to Prof. Alfred Gysi Zurich, Switzerland

We are informed that Prof. Alfred Gysi of the Dental Institute, University of Zurich, has been awarded the Marcel Benoist Foundation Prize for 1925, amounting to 30,000 francs. Of the candidates, Prof. Dr. Alfred Gysi was awarded the prize by a large majority for the treatise which he wrote in 1925, and which is published in the chapter on articulation in the third volume of the *Handbook of Dentistry*, edited by Dr. Bruhn. The determining factor in judging the treatise was Dr. Gysi's invention of artificial posterior teeth and of several articulators, which enable dentists to make for their patients full dentures of greater efficiency than has been possible heretofore.

The presentation of the prize was made by the Bureau of the Marcel Benoist Foundation, whose President is Federal Counsellor Chuard, in the presence of the President of the Confederation, the French Ambassador, V. Hennessy, the Rector of the University of Berne, Prof. Sahli, Dr. Carrière of the Federal Swiss Sanitary Commission, Prof. Girardin of Freiburg, and Dr. Vital, Secretary. During the dinner following the awarding of the prize great satisfaction was expressed by all that a dentist had been able to win the prize of the Foundation.

We wish to extend our cordial congratulations to our honored research-worker and collaborator. His arduous and extensive research work in prosthetic dentistry has earned him universal recognition and respect, and the dental profession of Switzerland participates in this distinction which honors not only Dr. Gysi but also the whole dental profession. — (*Schweizerische Monatsschrift für Zahnheilkunde*, December, 1926.)

Dr. George B. Winter Honored

On December 6, 1926, the St. Louis Dental Society honored their fellow-member, George B. Winter, with a testimonial dinner. While this started as a local affair, it assumed such huge proportions under the direction of the committee, Drs. E. B. Owen, J. D. White, and E. H. Keys, that men responded from all parts of the country.

J. F. Alcorn, President of the St. Louis Dental Society, presided, and J. P. Marshall, First Vice-President, acted as toastmaster. Those responding to toasts were: Henry L. Banzhaf, Milwaukee, Wis., President of the American Dental Association; M. C. Marshall, St. Louis; Otto U. King, Chicago, Ill., Secretary of the American Dental Asso-

ciation; C. R. Grissinger, Pittsburgh, Pa.; W. F. Whalen, Peoria, Ill., President of the Illinois State Dental Society; R. Boyd Bogle, Nashville, Tenn.; and Donald M. Gallie, Chicago, Ill.

It was a wonderful evening, full of brotherly love and good fellowship, a just tribute to Dr. Winter for his distinguished service to the profession.

Medical College of Virginia

The Executive Committee of the Board of Visitors of the Medical College of Virginia, Richmond, has authorized President W. T. Sanger and the College authorities to map out a twenty-year building program preliminary to the construction of three new buildings projected for the immediate future. These will include a women's dormitory, a new clinic for the walking sick, and laboratory for chemistry, bacteriology, and pathology.

At the memorial exercises held at the Medical College of Virginia, Richmond, on January 7, 1927, for Dr. John W. Brodnax, anatomist and artist, who died last October, papers were read by Dr. W. Lowndes Peple, Dr. Robert C. Bryan, Dr. H. L. Osterud, Dean W. F. Rudd, and Mr. Rufus Alley. Dr. Brodnax was a member of the Department of Anatomy of the Medical College of Virginia for thirty-three years.

A Proposed American Dental Health Center In Korea

Ten years ago the first dental missionary established the Dental Department in Severance Union Medical College at Seoul, Korea. Today there are seven or eight such departments in the Orient, and dental work is gradually winning its just place in the medical mission program of the world.

It is proposed to build in Seoul a four-story brick building, to be known as the *American Dental Health Center* (or by some such appropriate name), for the carrying on of dental treatment, teaching and research in their relation to public health. This building will be located on the same plot with the Medical School and Hospital buildings, which have been established in Seoul for thirty years, on a most prominent corner, fronting the main street, directly across from a new

million-dollar railroad depot, the main stop on the world's highway, halfway between Tokyo, Japan, and Peking, China.

The present management is under all mission boards cooperating for Christian education in Korea, with headquarters in New York, and the direct field management is under a Field Board of Managers composed of representatives of the leading mission bodies in Korea and prominent native Christians.

The Dental Department is directly controlled by Dr. J. L. Boots (University of Pittsburgh) and Dr. J. A. McAnlis (Northwestern University), their salaries being paid by those interested in this work entirely outside any building and endowment fund now proposed, and their appointments are for life, both having now served five years.

The future management will be the same as in all mission work; it will be taken over by the native organization as soon as they are able to support and continue it.

The particular research possibilities are not equalled in any other place—17,000,000 people with a limited, fixed diet containing no sugar and little fat soluble vitamin, and presenting certain typical dental and oral pathology, and also a large student group of several thousand who continue their old diet and add to it the sweets of the American and Japanese diets.

Dependent upon mission donations, the work is always limited in its scope, as mission funds are provided mainly for evangelistic work. With a $100,000 endowment provided by individual dentists and state and local societies in the form of $10.00 shares the most prominent dental unit in the Mission World can be established. A site is already provided, and two American dentists who are willing to work there on a mission salary; every mission group in Korea is cooperating, as well as the natives and the government. The Board of Trustees of the American Dental Association has endorsed the proposed plan of raising the money and establishing this unit and has appointed an American Dental Association Korea Clinic Advisory Committee, which consists of: H. E. Friesell, Pittsburgh, Pa.; M. H. Hoover, Gibson City, Ill.; L. E. Ford, Los Angeles, Cal.; W. J. Scheiffley, Harrisburg, Pa. (formerly dental missionary to Korea); J. B. Davidson, Newark, N. J.

Further information may be obtained by writing the Chairman of the Committee, Dr. H. E. Friesell, Schenley Apartments, Pittsburgh, Pa.

DENTAL LAWS

Summary of Dental License Requirements Throughout the World

By Alphonso Irwin, D.D.S., Camden, N. J.

TUNISIA (Tunis)

An official decree of March 1st, 1899, prescribed the conditions for the practice of dentistry in this country; and these regulations, together with the supplemental provisions of decrees of November 7, 1903, and of July 4, 1910, and up to date, strictly govern the dental profession of the Regency.

By virtue of these laws every candidate for the practice of dentistry must submit a diploma giving him the right to follow his profession in the country where the document was issued to him. If judged satisfactory by the Tunisian government a diploma, locally viséd, confers upon the holder the privilege of practising in Tunisia without examination.

This privilege, however, is limited to coincide wholly with the right of the applicant to practise in the country of issue of his diploma, and must not be interpreted as allowing freer practice than that conceded by the original diploma.

As there are no dental schools of any kind in this country the Tunisian government, as may be inferred, recognizes foreign diplomas at their accepted value. It may be added, on the other hand, that the local government occasionally withholds its visé of conceivably valid diplomas, possibly in order to obviate disastrous professional competition.

Verified.

TURKESTAN

Turkestan is one of the autonomous republics of the so-called Union of Soviet Socialist Republics, formerly known under the name of Asiatic Russia. Professional license requirements are unobtainable at the present time for obvious reasons. Unofficial information would indicate that the prevalent ideas in regard to the practise of the professions are primitive and crude. This country, however, possesses a

wonderful interest to the traveling dentist bent upon exploring little known regions, or exploiting new fields for the practise of his profession. After obtaining permission from the local authorities, complying with the local laws, manners, customs, observing with due respect religious rites and beliefs, and paying the local taxes required, one may practise his profession.

TURKEY

Turkey of today is no longer the Ottoman Empire, but the Republic of Turkey, formally voted as such, late in October, 1923, by the provisional government styled the "Government of the Grand National Assembly at Angora." The governing body is a one-chamber institution, which elects the president (now formally declared to be Mustapha Kemual Pasha). See Dental License requirements of Iraq and Turkey in Asia.

In addition to recent official reports of new dental legislation, we present the Ottoman regulations prior to the World War, as collateral information essential to understanding the status of alien dentists in the Turkish Republics. Constantinople, Turkey, advices state that foreigners desiring to practise dentistry in Turkey are required to send in their application (in Turkish) with their dental diploma to the Medical Council. Upon paying an entrance fee of fifteen Turkish pounds ($66.00), an examination is given in either the French or Turkish language; no interpreter is allowed. On a successful passing of this examination, a further fee of five Turkish pounds ($22.00) is paid, for which the applicant receives a diploma permitting him to practise in the Turkish Empire.

Under the old regime, simple registration was all that was required, and even that was rarely attended to. Applicants are now required to have a preliminary education equivalent to the Bachelor of Arts degree of the secondary course in the Turkish schools. While there are many native dentists in Constantinople, there are only two Americans practising there, and both are doing fairly well. They practise principally among the foreign residents, as the native population does not pay very much attention to its teeth. A recent unofficial report of changes in the status of dentists and dentistry in Turkey is announced as follows: "Turkish women have for the first time entered the field of dentistry. Turkey's first women dentists, Gourra and Chadie Hanoums, have received their diplomas from the Stamboul School of Dentistry."

There are no dental laws in Turkey. Another official states that, "Any graduate of the Turkish Dental Faculty may practise dentistry without any other license, permit, or examination test." Only Turkish

citizens are allowed to practise dentistry in Turkey, except that foreigners established in practice before January 1, 1923, are permitted to continue such practice. Graduates of the Dental Faculty must serve in the Gulhaneh Hospital, Constantinople, for a period equivalent to their term of military service before they are given their diplomas. A Turkish diploma is the only document required to practise dentistry."

The oral hygiene movement is in its infancy and the government is doing its best to develop it. No special institutions or public lectures exist as yet. The name and address of the only dental school in Turkey is The Dental Faculty, The University of Constantinople, Constantinople, Turkey; or for other details address Server Bey, Director of The Dental Faculty, University of Constantinople, Turkey.

Verified July 8, 1926.

TUSCANY

Tuscany forms a very important part of the Kingdom of Italy. It possesses a population of nearly three millions. Italian credentials are required, also a medical and dental degree and licenses.

Consult Italy for the dental license requirements. Address Regia Universita degli Studi, Roma, Italy, for full details.

TUSCAN ARCHIPELAGO

The islands of the Tuscan Archipelago are off the west coast of Italy, in the Mediterranean Sea, lying between Italy and the island of Corsica. They belong to Italy, consequently Italian dental license requirements are enforcible. Consult Tuscany and Italy for additional information.

UGANDA

Uganda, the British Protectorate in East Africa, has 110,000 square miles, and an estimated population at 3,200,000. This country is well advanced in civilization, 750,000 of the people belonging to the intelligent class. While British credentials may be preferred, properly authenticated credentials of other nations, verified in the prescribed manner, may be accepted for the legal practise of dentistry. Consult the dental license requirements of the Union of South Africa for additional information.

UKRANIA

Ukraine is one of the republics of the Union of Soviet Socialist Republics. It is the largest, richest and most densely populated part of the old Russian Empire. No recent official information about the dental license requirements are available for obvious reasons.

UNION OF SOUTH AFRICA

1. There is no general dental law for the Union of South Africa. For the Cape Province, the general Medical and Pharmacy Act No. 94 of 1891, as amended by Act 7 of 1899, and Act. No. 21 of 1919, constitute the fundamental law. Each of the other provinces of the Union of South Africa has its own acts. These, however, do not differ essentially from those of Cape Province, except in the matter of fees. In Cape Province the fee prescribed is £2:10:0. The other fees vary somewhat, and are on the whole somewhat larger.

2. The dental license regulations for the Cape Province of the Union of South Africa may be summarized as follows:

The only American degrees recognized are those taken by South African students who have been domiciled in this country prior to the beginning of their dental studies.

3. Dentists are licensed in the Union of South Africa but there is as yet no examination. The examination required is that of Great Britain. This, however, will probably be changed shortly as a college of dental surgery has been opened at the Witwatersrand University in Johannesburg, and this will probably be shortly recognized, and all dental applicants will be required to submit to its examinations.

4. There is no interchange of dental licenses of any sort between the provinces of the Union of South Africa or with foreign countries. The dentist must be licensed in the province in which he practises.

5. The list of recognized dental schools is contained in the copy of the regulations. To the list of recognized dental colleges should be added the Witwatersrand University, the dental college which will be recognized within a short time.

Verified May 26th, 1926.

PRACTICAL HINTS

This department is in charge of V. C. Smedley, D.D.S., and George R. Warner, M.D., D.D.S., Suite 1206 Republic Building, Denver, Colorado. To avoid unnecessary delay, Hints, Questions and Answers should be sent direct to them.

NOTE—Mention of proprietary articles by name in the text pages of the DENTAL DIGEST is contrary to the policy of the magazine. Contributions containing names of proprietary articles will be altered in accordance with this rule. This Department is conducted for readers of the DENTAL DIGEST, and the Editor has no time to answer communications "not for publication." Please enclose stamp if you desire a reply by letter.

Editor Practical Hints:

I have a woman patient, 30 years of age. I made her full upper and lower dentures (rubber base) a year ago. They did finely up to a month ago when she noticed a burning sensation in the upper and lower jaws and also on the tongue and mucosa of the lips; in fact, wherever the tissue comes in contact with the rubber. The tissues look red and inflamed.

Will you please suggest a remedy for this.

H. L. P.

ANSWER.—I should judge that in all probability there has occurred sufficient shrinkage of the bony support under these plates to permit them to settle sufficiently so that they impinge upon one or more of the nerve trunks as they emerge from their respective foramina. Also, of course, the patient might have suddenly developed a susceptibility either to the vulcanite or to the pigmentation in it. You might try first, if you wish, relieving generously in the old vulcanite denture over all five foramina and their distribution areas. It would no doubt, however, be best to make new dentures on metal bases, preferably gold, using particular care, of course, to avoid pressure as recommended above.—V. C. SMEDLEY.

Editor Practical Hints:

I am enclosing radiograms of a case upon which I should like to have some advice from you.

These impacted teeth are in the mouth of a young woman twenty-five years of age. If we remove only the third molars, what are the

probabilities of the second molars erupting, provided we remove any overhanging bone that would have the tendency to prevent their coming up into normal position? Because of the patient's age and the apparent proximity of the roots of the second molars to the inferior dental canal I should much prefer to give nature a chance first.

A. B. T.

ANSWER.—I am very glad to be let in on your most unnatural and interesting case of impactions of both second and third molars. I have talked this over with the other men in the office and we all agree that there is no question about the advisability of removing only the third molar on the left side. Of course, the second may not come up even then, but it has a very good chance and I believe it will do so. The one on the right side is more doubtful, but it seems to me that no harm can come from removing the third molar only, waiting for the second to come if it will.

According to the submandibular film, the second molar is freer from impaction from the first than it would appear on the other intraoral films.—G. R. WARNER.

Editor Practical Hints:

Will you please suggest a method by which I can stop a child of three years from sucking her thumb and fingers. I have tried everything and nothing seems to be of any avail. Any suggestion would be highly appreciated.

T. F. M.

ANSWER.—We broke our little girl of this habit by simply tying up the sleeves of her sleeping garment, thus enclosing her hands completely during the night. She sucked her fingers only at night, however. Another very good way is to fit a pasteboard tube (such as is used for mailing calendars or other documents) that is long enough to enclose the entire hand and extend beyond the tips of the fingers. This can be sewed or fastened with adhesive tape to the sleeping garment or dress and should be persistently kept in place until the habit is broken.

A child three years old is old enough to reason with. It should be explained to him that this inconvenience will be discontinued as soon as the habit is broken.—V. C. SMEDLEY.

Editor Practical Hints:

A patient complained of heating over his whole body, starting toward evening and generally lasting until ten the next morning. There was loss of sleep and at times a sensation as if hot needles were being

pushed into the skin so that the patient was sent away from a hospital on account of his cries of pain. Doctors could not help him; neuropathics and rest at home and in hospitals were ineffective.

He had many x-rays taken of his body, but because he had had his teeth out, there was never an x-ray of his jaws.

I radiographed his upper and lower jaws and found many places that should have been cleaned out at the time of extraction. On tracing an infective area in the upper left jaw I noticed it led into the antrum and on enlarging this aperture I noticed the antrum tightly filled with a sac holding a fluid. I called up the nose specialist in town and could not get in touch with him, so I was forced to open the sac and drain out a thick grayish pus (half a cup) and then shelled out the sac that lined the antrum. The antral membrane was pink and tightly stretched over the walls and I could not locate a break in the membrane anywhere. I packed the antrum with gauze and dismissed the patient. The pain and heatings (as he calls it) over the whole body have recurred each evening since the removal and as badly as ever. He says the pain (heating) has started in his jaws also.

Could you help me and give me information from what these heatings could come?

H. B.

ANSWER.—The symptoms described in relation to your case are indicative of nerve disturbances, which may be due to focal infection or to any of a number of other causes. It would seem wise to exhaust every possible means in eliminating focal infection.

Your treatment of the antrum was good, but that condition had been present for such a long time that it is possible that your patient has not yet had time to recover but will in the near future. I should certainly clear up all the residual areas in the jaw, if you have not already done so. If your patient does not recover after you have removed all demonstrable areas of infection, I should take him to a neurologist who has not seen him. It is possible that the other men were prejudiced, and that a new man might go into the case from a new point of view.—G. R. WARNER.

Editor Practical Hints:

I am forwarding to you a recently extracted upper left cuspid. I am enclosing also radiographs of this tooth and surrounding teeth, the pictures having been taken at different intervals.

When this patient first came to me, he complained of some discomfort in the region of the left upper lateral. This tooth was broken off in an accident many years ago, but never caused any discomfort

until last spring. At the first visit I removed the root stump and also the left central. The cuspid also showed definite signs of trouble, but since it was such an important tooth, I left it for the time being with the intention of treating it and hoping that it might serve the purpose of an abutment tooth.

I had the patient come back on July 6, at which time I again x-rayed this area and at the same time tested the teeth for vitality. I drilled in from the lingual and after the drill was in about three millimeters, the patient could feel it very distinctly. I decided that there must still be life in the tooth, but I did not know that there could be a granuloma at the end of the root and still have definite sense of pain in the pulp chamber. I filled the cavity I had made with paste and cement and decided to leave it alone for a while to see what would happen.

The patient came back today (Sept. 9) and, after taking some more pictures and finding that everything looked about the same, I determined to drill into the tooth again to find out if there was a vital pulp in the tooth. I anesthetized the tooth and surrounding area. I was surprised, after drilling more than eight millimeters, that I could not find the pulp canal. I made up my mind right then to remove the tooth. After I removed it, I made cross-sections of it to see what the thing was like. I did find a very small opening through the canal, but almost all of the original canal was filled with secondary dentin. There was also a large granuloma at the end of the root.

Since I first removed the lateral root and the left central, there has been a draining of pus through the region of the lateral. Today I made an incision in this area and a lot of pus drained out. I think this pus formation was due to the infected cuspid. The cuspid tooth has always felt comfortable in spite of its diseased condition.

At the same time that this man had the accident which broke the lateral tooth, the cuspid and central teeth must have been knocked loose. The reason for the deposit of secondary dentin is somewhat a mystery to me. My explanation would be that there must have been live tissue in the canal but, due to abnormal changes after the accident, the pulp had degenerated.

I should like to hear from you in regard to this case. I should not have had so much anxiety about this tooth if I had not had a definite response to pain when I drilled into it last July.

E. J. M.

Answer.—The radiograms indicate that there was a cystic degeneration of quite a large area involving the apical regions of the left central, left lateral and left cuspid. The death of the cuspid pulp was probably due to involvement at the apex. The explanation of your

encountering vitality, or seeming vitality, when you first opened into it is that there probably were some few fibers which were not yet cut off.

The appearance of the apex of the root in both radiogram and visual examination is that of a granuloma, so the pulp must have been infected for quite a while before the tooth was extracted and irritated for a long time before that, a long enough time to account for the calcic degeneration and formation of secondary dentin. The infection around the lateral incisor was presumably of long standing. A large number of cases show that teeth adjoining an infected area, particularly as large an affected area as shows here, are prone to have degenerative changes. Hypercementoses are very common on vital teeth adjoining infected teeth.

It would seem to me wise to open into the center of the cystic area, which would be where the lateral incisor was extracted, and examine the condition of the bone. I suspect that you will find a cheesy mass which should be cleaned out. You may find fluid, but the very last radiogram shows an amorphous condition of the bone, which probably is pathological.—G. R. WARNER.

Editor Practical Hints:

About two months ago I made a bridge for a patient, 18 years of age, extending from cuspid to cuspid in the upper jaw, and used full gold crowns on the cuspids. The cuspids were small teeth, and the bite very close. In three weeks' time the patient returned with the bridge in her hand. I cemented it on again and it stayed about a week. I have cemented it several times since and cannot make it stay. What procedure would you advise, and what kind of an apparatus would you suggest for a close bite?

D. C. B.

ANSWER.—With modern methods of making bridge attachments to vital teeth, gold shell crowns are contra-indicated in any part of the mouth where they can be seen. In the case of your close bite the so-called Carmichael or Tinker preparation, or what is known as the pin-ledge preparation, would be indicated, using hard gold for the castings. As all of these preparations are well known, it should not be necessary to go into them in this Department.—G. R. WARNER.

Editor Practical Hints:

As a reader of THE DIGEST I am coming to you for some advice in regard to the following case:

The patient is a woman, 35 to 40 years of age. The lower left second molar had an abscess. The lower left first molar was partially

devitalized. The patient refused to have the second molar extracted. In the first molar I sealed nerve devitalizing fiber with gutta-percha. The patient had pain, but intended to wait for it to subside before calling again.

One week later the pain increased and there was a little sloughing around the tooth, which I removed. I removed the first dressing and sealed in another. Three or four days later I extracted both first and second molars. Upon extraction of the second molar there was no bleeding and the alveolus seemed dark. I thought it was due to leakage of the first treatment, so I applied tincture of ferric chloride and used a mouth wash. About one week after extraction I dusted the surface and socket with a mixture of orthoform and corn starch (1-4), which relieved the pain. The second bicuspid is somewhat loose and painful at times.

I have seen the patient three times a week for the past month, always washing out and applying orthoform in the sockets. Lately there has been a little blood in the point of the socket. There is no sequestration of the alveolus, but it seems darker and softer. I certainly should appreciate your advice for further treatment.

J. L. A.

ANSWER.—I believe that your diagnosis of arsenical necrosis is right, and in a case of this kind it is not always wise to wait for sequestration. Arsenic being an active poison, it is not limited in all cases by sequestration. It is therefore wise to remove the sequestrum and all doubtful-looking tissue.

I have found the use of ordinary whiting to be helpful in cases of arsenical poisoning. Pack the whiting throughout the wound or affected area and then wash it out with great force. The whiting tends to pick up the arsenical crystals, which are carried out with it. In the absence of sequestration, the pathological tissue should all be removed.—G. R. WARNER.

Editor Practical Hints:

I made a full upper plate for a woman patient whose teeth had been out three months. I inserted the plate and instructed her to return in a couple of days for adjustment. She came after an absence of over two months. I found the flange on the left side had cut into the muco-buccal fold, and nature had thrown out two finlike processes of flesh. How can these be removed? The plate now has become very loose. It fitted well on delivery.

H. H. M.

ANSWER.—The tissue of which you speak can be excised under a

nerve block anesthesia and the plate can be relined after the tissues have recovered from the operation. It is wise to instruct patients when a plate is delivered to them that there is almost sure to be resorption of the tissues, and that the plate should be remade or relined within a few months.—G. R. WARNER.

Editor Practical Hints:

I should greatly appreciate any advice as to why this patient's centrals are separating. The patient is about 28 years old and has all her upper teeth in good condition.

She went to another dentist, who said she had a very severe case of pyorrhea. From the x-ray I can see no recession. It seems that the space between the centrals is becoming larger very rapidly.

On the lower jaw the right first molar is missing.

A. L.

ANSWER.—The radiogram submitted has so little diagnostic value that it is not possible to tell the condition of the periodontal membrane around the teeth involved.

It is quite possible that the growing separation is caused by traumatic occlusion in this particular region. I think you will find upon examination that the lower centrals strike very closely on the lingual surface of the upper centrals and the condition can be arrested by correcting this.—G. R. WARNER.

CORRESPONDENCE

Dr. Hyatt Explains Fissures

December 23, 1926

Dear Doctor:

Yours of the 15th just received. This is my reaction to the case you relate about two little girls, aged 10 and 12, who had fissures in their superior bicuspids and in all their first permanent molars, and who are now over twenty years of age and no caries has developed in these fissures.

1. Did they really have *"fissures,"* or were they only "grooves"?

This is not such a foolish question as it might seem. At an afternoon session on Preventive Dentistry where Dr. X was Chairman and I was leader, there was an argument for almost two hours. Dr. X and others maintained that all fissures do not decay. It then happened that I gave the definition of a fissure, and at once Dr. X and those who agreed with him exclaimed: "Oh, if that is what you call a fissure, why, yes, they should all be filled at once." They thought the definition I gave for a fissure was my own, but I referred them to their dental anatomy and advised them to become familiar with the meaning of the terms used. If you wish to take the trouble to read my article in *The Dental Items of Interest,* July, 1924, you will see a large number of definitions given for different dental terms. A fissure is an opening in the enamel, a flaw, and because of its smallness and its shape it affords an ideal home for undisturbed bacterial acidity. When a sharp-pointed explorer sticks in a groove, there is a fissure at the base of this groove. This fact should always be remembered when talking about fissures.

2. What are the chances that a fissure will remain non-carious for twenty years?

This question I presented to our Statistical Department and to our Doctor of Mathematics. As you have visited our Clinic and have seen how carefully the examinations are made and recorded, and have seen also the punching of cards and their passage through the machines where the clinical facts are recorded with mathematical accuracy, and have seen how conservative the deductions are that are made from these figures, you, I am sure, will be interested in the reply I received, and to you it should mean much.

There are 2500 chances to 1 that a fissure will decay in less than

twenty years. Professor C. F. Bödecker also has shown in his article in *The Dental Items of Interest* for November, 1926, that 8,400,000,000 bacteria can find undisturbed lodgment in the average-sized fissure. I leave it to you to decide on the *morality* of exposing any child to such odds. I also leave to you the decision if an occlusal pin-hole filling is as dangerous to the tooth as is an open and unfilled occlusal fissure, particularly when you recall the fact that in Dr. Ottolengui's report to the New York State Dental Society on *Why Amalgam Fillings Fail* it was shown that polished occlusal amalgam fillings were 100% perfect. No recurrent decay was found in these cases.

3. Where does decay start in an occlusal fissure?

Is it not a fact that decay makes its greatest progress at the base of a fissure? Is it not true also that mastication keeps the orifice of an occlusal fissure sufficiently clean so that decay does not increase the size of the orifice? If you answer "yes" to these two questions, then is not the greatest danger from occlusal fissures, due to the fact that the progress of decay is hidden to clinical observations?

4. How many persons are immune to caries, like the two young women you write of?

In the examinations of over 50,000 cases we find that here in our country, and in our present state of civilization, less than 1/20 of 1% are immune; also, that these persons who are immune have teeth that are practically free from pits or fissures. Please make your own deductions.

5. You state that many mistakes are made in the interpretation of x-ray pictures, and that many teeth have been needlessly extracted, and from this you infer that many fissures might be treated which would never need treatment.

As to the number of fissures which might never need treatment I refer you to the information given under ¶2. In reference to the interpretation of x-ray pictures, I would state that the argument or theory for the practice of prophylactic odontotomy is not the same as, nor is it in any way analogous to, the diagnosis based on interpretation of x-ray pictures.

The argument and theory offered for acceptance as the foundation for the practice of prophylactic odontotomy is based on *facts*. These facts have been secured, first, from careful clinical examinations of *millions* of teeth in living persons, and, secondly, from the study of the actual formation or shape of certain parts of the teeth where caries invariably occurs. The entire program of prophylactic odontotomy deals with facts, and the deductions are as logical as that twice two makes four. Prophylactic odontotomy does not deal with hypothetical theories which may or may not be found to be facts.

6. When will the dental profession approve of cutting all fissures?

The dental profession through its organized societies has already approved. Fourteen State Dental Societies, ten local Dental Societies, the Canadian Dental Association, the American Dental Association, the International Oral Hygiene Commission have adopted resolutions in which is included the following:

> "Particular care and attention should be given to developmental pits and fissures, whether occurring in primary or secondary teeth or whether decay is or is not present."

You may say that this is not advocating "cutting fissures," and to a certain extent this is true, but just as soon as individual dentists become interested and give attention to fissures *before* decay is present and are able to distinguish between fissures and grooves, they will soon learn that *cutting* is necessary.

In the West, as well as in the East, we have been disappointed in the results obtained in treating fissures without cutting. When non-carious occlusal fissures are cut out and filled and the fillings polished, we secure splendid results.

Trusting these few remarks may interest you and with kindest regards, I am

Yours sincerely,

THADDEUS P. HYATT

An Anomaly

Glendale, California.

Editor, DENTAL DIGEST:

I am sending a superior right central that I extracted two years ago from the mouth of a boy, eighteen years old.

A radiograph did not show what was really the cause of the trouble but gave the appearance of a split root at the apex. On opening from

the lingual with a lance the enamel crown of the fused supernumerary was exposed, so the tooth was extracted. Immediate relief and quick granulation followed.

The anomaly was held to see if there were any further developments, but after these months the case is perfectly healthy.

ROY V. HOGUE

"A Financial Failure"

If the dentist who wrote to me on January 30, 1927, signed the letter "A Financial Failure" and mailed it in a town in Northwestern New York, has the courage to send me his name, which I will not publish, we will go on from there.

GEORGE WOOD CLAPP.

DENTAL SECRETARIES and ASSISTANTS

Secretaries' Questionnaire

All questions and communications should be addressed to Elsie Pierce, care of THE DENTAL DIGEST, 220 West 42nd Street, New York City.

NOTE—HAVE YOU A BETTER WAY? HAVE YOU A TIME-SAVING SHORT CUT? DO YOU KNOW A "STUNT" THAT LIGHTENS THE WORK OR MAKES FOR EFFICIENCY IN THE OFFICE? IF SO, WRITE TO ELSIE PIERCE, CARE THE DENTAL DIGEST, 220 WEST 42ND ST., NEW YORK. YOU MAY HELP A NUMBER OF GIRLS WHO ARE JUST BEGINNERS—AND YOU KNOW HOW YOU NEEDED HELP DURING YOUR FIRST FEW MONTHS IN A DENTAL OFFICE. OR IF YOU NEED HELP NOW WRITE TO ELSIE PIERCE—SHE'LL HELP YOU.

Dear Miss Pierce:

Please tell me what to do in the following emergency:

The other day a lady patient was seized with a violent nosebleed while in the chair. The doctor said to me: "Take Mrs. B— to the rest room and help her to check that nosebleed." I did as asked, but I must confess that I was frightened and at a loss as to just what to do, since I had never had such an experience. What should I have done? I know there must be other assistants who have had similar experiences.

B. W., Wisconsin.

ANSWER.—In a severe case of nosebleed the following treatment may be used, whether in the dental office or anywhere else. If possible, place the patient in a reclining position with the head hanging backward, loosen all clothing about the neck, or remove it if possible. Cold compresses should then be applied at the back of the neck. If cold compresses are not available, use a cold piece of metal such as a key, a large coin, a penknife, etc. Place a roll of cotton (cotton roll) under the upper lip between it and the gum. If no cotton roll is handy, a roll of paper will answer the purpose.

If bleeding does not cease within a reasonable time, try a saline solution snuffed up the nose, a teaspoonful of salt to a cup of water. Pinching the soft part of the nose below the bone will help to stop the

bleeding. A plug of cotton or gauze placed about one inch up in the nostril from which the bleeding comes may have to be resorted to. If you have nothing better at hand, a lead pencil may be used to push this plug into place.

If the bleeding continues despite the above first-aid methods, summon a physician. Refrain from giving stimulants, as this increases the heart action and stimulates bleeding. In cases where the patient has become so weakened that collapse is imminent, it may be absolutely necessary to give a stimulant. One-half teaspoonful of aromatic spirits of ammonia in half a glass of water is a good stimulant. If this is not available, any other stimulant may be used, but again I cannot stress too strongly the fact that, whenever possible, stimulants should be avoided until bleeding has been checked.

Violent movements must be avoided. Do nothing to promote the bleeding. When it has ceased, quiet and rest should follow, with plenty of fresh air. Also, keep the body warm, and hot water bottles may be necessary to accomplish this. In cases of serious collapse as the result of a severe hemorrhage of any kind, when death can very easily be the result, this can often be prevented by forcing the blood into the body from the limbs by raising the feet and bandaging the legs from the toes to the body and the arms from the fingertips to the shoulders. The bandage should be fairly tight.

Here it may be well to explain the three types of bleeding or hemorrhage: (1) arterial, when the blood is lost rapidly, coming in bright red spurts or jets; (2) venous, when the blood is of a dark red bluish cast and comes in a steady flow; (3) capillary, when the blood oozes out steadily in a brick red color. As a rule the most severe hemorrhages are from injuries where an artery or a large vein has been severed.

Every dental assistant should be competently trained in first aid, as there are many emergencies that can arise in a dental office requiring competent first-*aid* treatment. I would suggest that you join a First Aid Class. The Red Cross has such classes under its jurisdiction, and a number of the societies for dental assistants make this study a part of their special instruction.—Elsie Pierce.

Dear Miss Pierce:

I have obtained many good suggestions from the Questionnaire that have helped me in my work, and I am glad to pass the following ideas along, hoping they may prove of assistance to some of your readers:

If the doctor runs short of his favorite standard mouth wash, prepare a small bottle of concentrated solution of potassium permanganate. A drop or two in a glass of water makes a very good mouth wash.

To clean the handpieces, use a pipe-cleaner. These come in various sizes and may be purchased at any store dealing in smokers' materials. They are also fine for cleaning saliva ejectors, being pliable.

A salt shaker filled with sodium bicarbonate and kept on the hand basin where you clean the cement slabs is very useful. Often one cannot take the time to clean the slab immediately after using. Run the water over it and sprinkle freely with the soda. You will find that the cement is all loosened up when you come to clean it.

When the doctor has to place a temporary stopping in a cavity, put a small vial of alcohol on the tray containing the instruments and materials to be used. Immersing the packer freely in alcohol prevents it from pulling out the stopping.

H. F., N. Y. C.

Perhaps the following letter will interest our readers:

Dear Miss Pierce:

I have enjoyed reading the department conducted for dental assistants in THE DENTAL DIGEST. I wish to forward my appreciation for the very good suggestions I have found therein. I am a dental assistant, although of the opposite sex usually found in a dental office. I have worked for the same dentist for a number of years. I do all the plate, bridge and inlay work and assist at the chair. During the past year we have had an average of eighteen patients per day. Our office hours are from 9 A. M. to 9 P. M., so you see that I have plenty to do.

If I can be of any help, do not hesitate to call on me, as I shall call on you for any assistance I may need.

Sincerely,

GEORGE M., Oregon.

Educational and Efficiency Society

FOR

DENTAL ASSISTANTS, FIRST DISTRICT, NEW YORK, INC.

At the regular meeting of the Educational and Efficiency Society for Dental Assistants, New York, on January 11, 1927, at the Academy of Medicine, Dr. Victor Hugo Jackson spoke on *Interesting Facts of Value to the Dental Assistant* and presented a clinic demonstrating his lecture. Dr. Jackson related some very interesting facts concerning dentistry, telling about the early struggles of the profession in seeking

recognition, the first dental courses, and the discovery of nitrous oxide. He concluded by giving several valuable health hints.

At the regular meeting of the Society held at the Academy of Medicine on February 8, 1927, the speakers were Mrs. Lillian R. Sire, Director, Division of Aliens, Department of Labor, State of New York, and Prof. Henry Gaines Hawn, a prominent lecturer. In her talk on *Philanthropy and Where It Belongs,* Mrs. Sire told several interesting experiences which she has encountered in the course of her work. *Speech as a Personal and Business Asset* was the topic of Prof. Hawn's lecture. He stated that speech is 99 per cent of personality; that personality and character are expressed by the tone of voice and the mentality back of that tone. The lecture was intensely interesting, the audience being swayed alternately by mirth and pity by the speaker's impersonations of different characters.

Mae L. Bennett, Director of Classes, announced that a class in Practical Psychology, under the direction of Dr. Louis E. Bisch, Professor of Neuro-Psychiatrics at the Polyclinic Medical School and Hospital, was now in session, to comprise five lectures. At the close of these lectures, classes in General Laboratory Assistance and Gold Casting will be organized, to be followed by classes in Chair Assisting, Sterilization, Parliamentary Law and Speaking, and First Aid. All sessions are held in the evening once each week, prominent dentists acting as instructors, and are open to all members of the Society, free of charge.

The Annual Dinner of the Society will be held at the Hotel Astor on April 30, 1927. Further announcement will be made later.

The Society meets regularly on the second Tuesday evening of each month, October to May, inclusive, at the Academy of Medicine, New York. A cordial invitation to attend is extended to the members of the dental profession and to their assistants.

The regular meeting of the Educational and Efficiency Clinic Club was held at the office of Dr. B. Tepper, 489 Park Avenue, New York, on January 17, 1927. Mae Quinn gave a demonstration of a comprehensive, efficient method of bookkeeping.

The Clinic Club presented a series of table clinics on Secretarial Assistance, Sterilization and the Sharpening of Instruments before a meeting of the Kings County Dental Society on January 13, 1927. On February 11, 1927, the Club presented a similar demonstration before the same Society on the occasion of its Fifteenth Anniversary Meeting at the Allied Dental Council, 425 Lafayette Street, New York. Both presentations met with distinct approval and success. Clinics will

also be given at the Fifty-ninth Annual Meeting of the Dental Society of the State of New York at Buffalo in May.

The Educational and Efficiency Clinic Club is composed of members of the Society. It is the aim of the Club to present clinics showing the many ways in which the capable dental assistant can render efficient service in the dental office, as well as to search out new methods of procedure in good office-management. At each regular meeting a different phase of dental assisting is explained and discussed. All members of the Educational and Efficiency Society are invited to join. Jean Tallaksen, Acting Director, may be reached at 24 State Street, New York.

The regular meeting of the Educational and Efficiency Society for Dental Assistants, First District, New York, will be held at the Academy of Medicine, 103d Street and Fifth Avenue, New York, on the evening of Tuesday, March 8, 1927, at 8 o'clock.

The essayist will be Dr. I. T. Zecher, who will speak on a topic pertinent to dental assisting, illustrated by lantern slides. Miss Elma Warner, a prominent teacher of physical culture, also will be a speaker, her topic being *Health Reminders.*

Montreal Dental Assistants Association

Dr. A. L. Walsh, Director of the Dental Clinic, Montreal General Hospital, addressed a large audience of the Montreal Dental Assistants Association at their second Clinic Class, which was held at the Montreal General Hospital on January 10, 1927. Dr. Walsh spoke on *Oral Surgery and Sterilization.* Miss Ruth Firth, Chairman of the Classes, presided.

Dr. R. Kennedy of the Hospital, with the aid of slides and microscope, showed the dental assistants the mysteries of the tiny organisms which are grown or killed according to the will of the modern bacteriologist. The principle of infection in wounds and sterilizing surgical equipment was expounded. It was shown that with absolute care a wound or surgical incision cannot become infected. To discover the remedy for the chief of local infections, i. e., decayed teeth, is the task of the dentist and the bacteriologist. Dr. J. A. Kerr assisted Dr. Walsh in demonstrations.

Dr. Kells Talks to Dental Assistants*

(*Continued from February*)

Now here's where I want to make a suggestion, which I hope will be worth while to you and give you something to think about. In the first place, I'll admit that this does not apply to the assistant who is in an office where a dental hygienist holds forth, but as they are few, I still hope the suggestion will prove of value, at least to some of you. It is this: Every *new* patient that comes to the office should be asked, "How do you brush your teeth? What do you use on your brush?" The chances are that this patient will give unsatisfactory replies, and ninety-nine out of every hundred will probably say that she never was taught how to brush her teeth.

That's my experience. Now then, during all of these years, I myself have spent this time on all new patients, drilling them into caring for their teeth and always giving them printed cards for instructions for the care of their teeth. Yes, I myself have always done this. You ask why I did not always have one of my trained assistants do it, and all I can say is, "I don't know." I started doing this long before I had a lady assistant (that means in the days of Charles and Carter), and I just "nacherly" kept it up.

Now then, I will put these questions to each and every one of you. First, does every new patient, child and adult alike, that comes into your office get a prophylactic lesson? Yes? Then Question No. 2: Does your employer give it, or do you? The employer? Well, then, why would it not be a time-saving scheme for him and a nice duty for you, if he will allow you, to relieve him of this lesson? Surely you could give the lesson satisfactorily.

By prophylactic lesson I mean this. I have a beautiful upper set of continuous gum teeth, which was made by my father some sixty years or so ago. Immediately upon beginning practice, I annexed this set and have used it ever since in this prophylactic lesson. With this set of teeth and a brush I show them just how to brush the teeth, and just why it is important that the brush must be small and properly shaped.

Personally, I do not believe that the *circular* method is the proper one. I believe that I have preserved my own teeth and those of my family and patients by what might be well called the *rolling stroke*. However, what I believe isn't going to count for much in your office, and it does not matter much anyhow, but all the same I hope that the rolling stroke is the one you use.

* An address delivered at the annual luncheon of the American Dental Assistants Association, Philadelphia, August 21, 1926.

And so, you see, I would have each of you young ladies not only impressed into this service, but impressed with its value as well. Teach your people just how to take care of their teeth and relieve your principal of this tiresome (because it is tiresome) duty. Then I'd hope you would do as I have always done, and that is, give each patient a printed card carrying these instructions, because most of our patients forget half we tell them, and if you should happen to be curious as to what is on this card, just write to me and I'll send you one. If, therefore, you do not do this now, that is the service I'd add to your duties (should your principal be willing), and a very pleasant duty it should be.

And now for some more ancient history! Way back in the dark ages, or to be exact, in 1882, two young girls were brought to my father as patients, and they have been our patients ever since. Not so long ago, one of these old ladies (they are old ladies now) called for an examination and there were yet to be seen two gold fillings, still intact, which the record shows my father inserted in 1883—mute attestation to the fact that for saving teeth gold foil stands supreme.

When these girls became of sufficient age, they studied stenography and one of them went into the office of a real estate man, a very warm friend of mine. It was not long before these two girls were earning pretty good salaries, and my friend Harry (the real estate man), taking a warm interest in their welfare, advised them to buy a little home of their own and stop paying rent. This they did, and in the course of time, this little home was all their own.

This incident impressed me greatly, and so whenever girls in my employ were in a position to do so, I advised them to follow the example of these patients of ours. Every month they would bank a certain amount for insurance, another for taxes, and still another for repairs, besides making the monthly payment to the homestead. When taxes were due, the money was in the bank to meet them, and it was the same with insurance and repairs. Of course they had to deny themselves certain pleasures and other things right along—not quite so many hats and gowns—but just think, in a few years the home would be all their own.

And so, young ladies, I would advise each and every one of you to consider well the example set you by these girls. Old age comes on apace. The sun shines brightly for you today, but what of the rain on the morrow? Some of these days a little home of your own might prove to be a wonderful comfort. The South is peopled largely by those who own their own homes, modest homes mostly. Should you ever visit our attractive city—and I hope you will some of these days, and come to see me at the time—you will find hundreds and hundreds of small homes occupied by their owners. Homes bring

happiness and contentment. Happiness and contentment are ever desirable. If a new thought has been given you, I'll be happy.

And now I gaze into the crystal ball, and what do I see? I see that the activities of the American Dental Assistants Association have only just begun. I see assistants' associations organized in all of the principal cities and states, and they are component parts of the National Association. And that's not all that meets my gaze into this crystal ball. I see here and there a young woman who realizes that her chosen field is too limited for her activities, she feels that she is capable of doing more for humanity, and with that idea in her little bobbed head she studies and becomes a dental hygienist. If she still remains in her old environment, that is, in the dental office, she can be as happy and content as ever, or if she should find her field of endeavor to be transferred to the schools, she would have even a more wonderful opportunity to be a benefit to her community.

'Twas Emerson, was it not, who wrote, "Hitch your wagon to a star"? Again I gaze into this wonderful crystal ball and I see that you girls certainly have hitched your wagon to a star of the first magnitude, and it is trailing you through the heavens at an amazing, if not alarming, pace. The possibilities of the lady assistants' association are limited only by the imagination of its counselors, and, judging from the progress you have made in two years, I see clearly that your imagination may be relied upon to get you there—wherever *there* may be.

Again I see in the crystal ball the picture of the Dental Assistants Association growing in membership and usefulness year by year, and always we see these annual reunions and the happy faces of the girls and their guests who gather at these tables.

"It's the songs ye sing
An' the smiles ye wear
That's a-makin' the sunshine
Everywhere."

Fortunate indeed is he who is considered worthy to be a guest upon this occasion, and, as for myself, this beautiful scene will be remembered ever, and I thank you for it!

1237 Maison Blanche.

DIETETICS and HEALTH

Artificial Sunlight for Cows

The following item from *The Literary Digest* of January 22, 1927, may seem rather far-fetched, but the time is coming when we shall learn to pay a great deal of attention to the conditions under which our more important foods are produced, and perhaps no food is more important than milk.

It might be interesting to put this away in the files of your memory because many of you younger men will live to see the day when something like this will be done, perhaps not in the ways suggested but maybe by feeding foods known to be rich in vitamins and other valuable materials to our milch cattle. This is already engaging the study of many milk-producers and food chemists. Do not think that all milk is alike, and do not hesitate to give your children the best milk you can get. If you cannot get really fine milk, correct the deficiency by the use of from one to three oranges daily per person.

G. W. C.

The novel procedure of exposing cows to ultra-violet rays in order to cure children suffering from rickets was advocated by Dr. Stuart J. Cowell, of London, before a recent conference in that city on the care of crippled and invalid children. Says Dr. E. E. Free in his *Week's Science* (New York):

"Although this sounds more like the forgotten magic of ancient times than like modern science, the suggestion is quite in accord with the latest scientific information. It is known that rickets can be cured by exposure of the child sufferers to the ultra-violet rays, either from a 'sunlight' lamp or in sunlight itself. Also, Dr. Alfred F. Hess, of New York City, and others have shown that the cure can be effected equally well by feeding to the sufferer certain kinds of food, including milk, which foods have been exposed to the ultra-violet rays. Such foods are altered chemically by the rays so that the curative power is imparted to them. Cows plentifully provided with the rays, as they are by pasturage under the summer sun, give milk which is already rich in these curative materials. But cows get little sunlight in the winter. Dr. Cowell's suggestion is that during the darker season cows whose milk is to be used for the food of sickly children should be exposed regularly to some form of ultra-violet lamp."

Books Received

A BOOK MAY BE AS GREAT A THING AS A BATTLE—DISRAELI

Variations In the Form of the Jaws, by J. Sim Wallace, M.D., D.Sc., L.D.S., Lecturer on Preventive Dentistry, King's College Hospital; Late Dental Surgeon and Lecturer on Dental Surgery and Pathology, London Hospital, London, England.

The subject is treated with a great deal of care and thoroughness and puts forth several new ideas. It has been the general opinion that the small jaws of the present age have been the direct result of civilization with its highly refined foods and the consequent lack of use of the masticatory organs. Dr. Wallace, however, suggests that civilization is due to the smaller jaws. He claims that in early times the people with small jaws were at a decided disadvantage in comparison with those having large jaws and strong teeth, consequently in the struggle for existence they were forced to resort to ingenuity in order to survive. They had to use their brains and so began the first steps toward civilization. This theory may or may not be correct, but it certainly opens up a new avenue for speculation.

The author claims that adenoids do not cause a lack of development of the arch because the child breathes through his nose, but because of the lack of ease in breathing through the nose he cannot masticate his food properly.

He states that the instinct to gnaw is necessary for the initiation of correct occlusion. Abnormal occlusions in the temporary dentition are most generally established with the eruption of the milk molar teeth, due chiefly to dietetic habits, because the normal stimulus to gnaw is inhibited in the civilized child.

The book is of interest primarily to the orthodontist. The author takes up the growth and formation of bone and then the various factors that influence it, such as disease and ill health, and the effect of pressure by muscles and the tongue. He discusses open-bite cases, and those that come in Class II and III (Angle), and gives their etiology. In conclusion he goes into accessory food factors, heredity and environment, variation and natural selection.

The book is well written and will be a valuable addition to the library of anyone interested in the subject. 265 pp., with 84 illustrations, index of authors and references, and general index. New York, N. Y.: William Wood and Company, 1927.—A. M. J.

EXTRACTIONS

No Literature can have a long continuance if not diversified with humor—ADDISON

A hemstitched doughnut as a prize for painting the lily is on its way to Moscow, where a *training school for clowns* has just been established.

(Taxi Driver)—Any part of the city for four bits. Can't get nuttin' cheaper!

(Countryman)—You can't sting me agin! I bought the city hall last week and they wouldn't give it to me.

I once knew a man
Who had seen some
Ships christened.
And for a week
He couldn't sleep
Nights
Because he had a baby
And was worried
For fear the minister
Would hurt her
When he threw
The bottle.

The absent-minded professor has been heard from again. When leaving home one morning he slammed his wife and kissed the door!

A Spring Note

(Teacher)—Can you give me a more elegant rendering of the sentence, "The sap rises?"

(Student)—The boob gets out of bed.

(Teacher)—Tommy, this essay on "Our Dog" is word for word the same as your brother's.

(Tommy)—Yes, sir; but it's the same dog.

(Modern Girl—to Fiancé)—What a charming little ornament you have sent me. But what is it? It's made of gold, but it's not a brooch, nor a ring, nor a bracelet; I have never seen anything like it. What is it?

(Fiancé)—A thimble.

A Definition

A man is a creature who will spot a shapely ankle three blocks away while driving an automobile in a crowded city street, but who will fail to notice in open country a locomotive as big as a house accompanied by a flock of forty box cars.

The
sky-
scraper
tall
is a
wonder
to all,
a thing
to admire,
beyond
question,

But oh! down below wherepedestriansgoit certainlyaddstocongestion.

Some Profanity!

Janet, a five-year-old resident of Boston, ran to her father one morning, exclaiming, "Father, brother Harold swore!"

"Swore, did he?" inquired the parent grimly, reaching for his slipper. "What did he say?"

"He said 'ain't'," responded Janet solemnly.

Advice to the Lovelorn

To the Editor: I am a young woman who has been married about fifteen years. What I want to know is have I made a mistake? My husband sleeps with a live sea gull under his pillow every night. He complains of insomnia and then keeps the rest of the family awake by getting up and scraping the rust off his golf sticks with a dull file. Ever since our wedding day he has made a habit of swinging from a chandelier about 3 A. M. and shouting "Block that kick!" My nerves are beginning to feel the strain. Do you think he really loves me?

Magnolia M.

Magnolia: That you should make any complaint in a case like this shows how blind you are to the little things that go to make up the truly happy home. Do you ever stop to think that your husband works every day, probably in an office where they won't let him have any sea gulls? Does it ever occur to you, my dear, that if he swings on a chandelier at his place of business the boss accuses him of loafing? And so far as your golf club complaint is concerned, is it not a true wife's duty to file them for him? You are a very shallow woman, Mag.—*N. Y. Sun.*

FUTURE EVENTS

THE "BEDOUINS OF ZETA CHAPTER," Xi Psi Phi Fraternity of the Pennsylvania College of Dental Surgery, will hold their annual reunion at the Hotel McAlpin, New York, at 6 P. M. on March 14, 1927.

DAVID H. NOLL, *Secretary,*
33 West 42nd St., New York, N. Y.

THE MASSACHUSETTS BOARD OF DENTAL EXAMINERS will hold an examination for registration for both dentists and oral hygienists at Boston, Mass., March 14-16, 1927. Full information, application blanks, etc., may be secured at the office of the Secretary, Room 146, State House, Boston. All applications must be filed at the office of the Secretary at least ten days before date set for said examination.

W. HENRY GRANT, *Secretary.*

The Fifty-Seventh Annual Meeting of the NEW JERSEY STATE DENTAL SOCIETY will be held at the Robert Treat Hotel, Newark, N. J., April 27-30, 1927. The essayists and clinicians will be the best that can be secured.

EDWARD L. WHARTON, *Chairman Publicity Committee,*
21 Fulton Street, Newark, N. J.

The sixty-third annual meeting of the CONNECTICUT STATE DENTAL ASSOCIATION will be held April 28-30, 1927, at New London, Conn.

The Forty-seventh Annual Convention of the TEXAS STATE DENTAL SOCIETY will be held at Austin, May 10-13, 1927. Headquarters will be at the Austin Hotel.

A very attractive postgraduate course by expert clinicians has been provided as a special feature of the meeting.

J. G. FIFE, *Secretary,*
Medical Arts Building, Dallas, Texas.

The Seventh Annual Meeting of the DENTAL HYGIENISTS ASSOCIATION OF THE STATE OF NEW YORK will be held at the Hotel Statler, Buffalo, N. Y., May 18, 1927. A cordial invitation is extended to dentists and dental hygienists to attend the clinics and literary meetings.

MARY A. OWEN, *Secretary,*
28 Tremaine Avenue, Kenmore, Buffalo, N. Y.

The next meeting of the MISSOURI STATE DENTAL ASSOCIATION will be held at the Chase Hotel, St. Louis, Mo., May 23-26, 1927. Dr. G. B. Winter is President of the Association, and Dr. E. H. Keyes is Chairman of the Program Committee.

O. W. BRANDHORST, *Chairman Publicity Committee,*
225 Lister Building, St. Louis, Mo.

The fifty-first annual meeting of the VERMONT STATE DENTAL SOCIETY will be held at Burlington, May 25-27, 1927.

LLOYD C. ROBINSON, *Secretary,*
Morrisville, Vt.

THE DENTAL SOCIETY OF WESTERN CANADA, which includes Manitoba, Saskatchewan and Alberta, will hold its first meeting under the auspices of the Edmonton Dental Society at Edmonton, Alberta, May 25-27, 1927.

Among the clinicians will be Frederick F. Molt of Chicago; Robert R. Gillis of Hammond, Indiana; Fred J. Conboy of the Ontario Department of Health; and W. I. Ferrier, President of the Washington State Dental Association.

LESLIE H. MCINTYRE, *Chairman of Publicity,*
10189 101st Street, Edmonton, Alberta.

The meeting of the WYOMING STATE DENTAL ASSOCIATION will be held June 20-21, 1927, at Thermopolis, Wyoming.

E. C. ANDREW, *Secretary,*
Cheyenne, Wyoming.

The annual meeting of the MAINE DENTAL SOCIETY will be held June 21-23, 1927, at The Belgrade, Belgrade Lakes, Maine.

W. F. FOGG, *Secretary,*
Waterville, Maine.

The position of DENTAL INTERN at the Lenox Hill Hospital, New York, N. Y., will be vacant September 1, 1927. The term of service is one year, with full maintenance. Apply in writing, not later than April 15, to

GEORGE F. SAUER, *Supt.,*
112 East 77th Street, New York, N. Y.